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Significant Contributions to the History of Psychology 1750-1920

Edited and with Prefaces by

DANIEL N. ROBINSON
Georgetown University

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Series A

ORIENTATIONS

Volume X

J. Elliotson

J. Esdaile

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Significant Contributions
To the History of Psychology
1750–1920

NUMEROUS CASES OF SURGICAL OPERATIONS WITHOUT PAIN IN THE MESMERIC STATE

John Elliotson

MESMERISM IN INDIA

James Esdaile

THE PHILOSOPHY OF SLEEP

Robert Macnish

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Numerous Cases of Surgical Operations without Pain in the Mesmeric State has been reprinted from the Philadelphia edition of 1843 (published by Lea and Blanchard).

Mesmerism in India has been reprinted from the London edition of 1846 (published by Longman, Brown, Green, and Longmans).

The Philosophy of Sleep has been reprinted from the New York edition of 1834 (published by D. Appleton & Co.).

Significant Contributions to the History of Psychology 1750-1920

GENERAL INTRODUCTION

In the last pages of the 1892 edition of his *Psychology*, William James is found examining the state of the discipline and assessing the claims made in its behalf by new and loyal adherents. Accepting that, indeed, psychology is a natural science, he then notes that this fact does not confer stability or even validity:

> It means just the reverse; it means a psychology particularly fragile, and into which the waters of metaphysical criticism leak at every joint . . . A string of raw facts; a little gossip and wrangle about opinions; a little classification and generalization on the mere descriptive level; a strong prejudice that we *have* states of mind, and that our brain conditions them: but not a single law in the sense in which physics shows us laws, not a single proposition from which any consequence can causally be deduced. . . . This is no science, it is only the hope of a science. . . . The Galileo and the Lavoisier of psychology will be famous men indeed when they come, as come they some day surely will . . . When they do come, however, the necessities of the case will make them "metaphysical." (pp. 467-468)

And in 1976, the presidential address to the annual convention of the American Psychological Association sounded a note not very different from James's; eighty-four years later, psychology is still in pursuit of a single law, still found lengthening a string of raw facts, still awaiting its Galileo and Lavoisier.

It is not my purpose here to dispute such appraisals. Rather, I would offer a construction of them that differs from the one provided by James and, more recently, by Professor McKeachie. I would submit that the *apparent* sluggishness of psychology's growth is, to a very considerable degree, the result of the extraordinary perspicuity of its eighteenth- and nineteenth-century founders who, themselves, extended their vision by standing on the high ground established by earlier generations of philosophers and metaphysicians. It was in these two centuries that those *isms* with which any developed psychology would have to reckon were advanced in nearly modern form: empiricism, nativism, materialism, utilitarianism, positivism. These were the centuries of Condillac, Cabanis, La Mettrie, Rousseau, Berkeley, Hume, J. S. Mill, Kant, Hegel, and Fichte. And to these names we could easily and aptly add dozens more. These were, as well, the centuries of such astonishing fecundity in the biological and physical sciences. Thus, as our own century emerged, its psychologists found themselves competing with many of the most tutored and capacious minds in all of intellectual history; minds seldom neglectful of even the subtlest nuance or most elusive epistemological possibility. It would not require a pessimistic temperament to sustain the conviction that only "a string of raw facts; a little gossip and wrangle about opinions" were left over to us by this legion of savants.

We do not account for periods of uncommon achievement by merely noting that figures of great genius were responsible. Aside from their specific contributions, the men and women of the *Enlightenment* and of the *Victorian* period are indistinguishably woven into the same fabric of humanity that covers all of human history. They are not instances of a strange species and, in many cases, they were not even well born or well bred. But if I were pressed to set them, *en bloc*, apart from the larger community of any age, I would be tempted to do so on the basis of their familiarity with what was known and written by those who came before them. It is in this only relevant sense of the term that we can call all of them *educated*. The long list of eminent men who never earned academic degrees includes Hume, J. S. Mill, and T. H. Huxley, but it contains none who was ignorant of what Matthew Arnold so fondly called "the best things said and done in the world." And with no intention to be reproachful, I would say that this characteristic sets them off most vividly from our own generation whose commendable energy and eagerness become listless when stalled by historical reflection. Yet, in the

absence of this reflection, strings of facts can only be lengthened meaninglessly and discussion of fundamental issues can only be reduced to a wrangle about opinion.

The scholars of the eighteenth and nineteenth centuries were, on the whole, confident and optimistic. Indeed, we find so much of their writing innocent because of these characteristics. We also wonder how people of such broad and deep intelligence could sustain so cheery and self-contented a disposition. At the risk of simplifying matters, I would again point to their command of the history of ideas. Since they knew how far others had advanced in the search for truth, they were able to measure the range of their own progress. They did not have to worry about repeating the obvious. When they discovered coal, they did *not* bring it to Newcastle! Their assessments of earlier thought were often harsh and biased, not to say wrong, but they knew what had been thought. With us, the situation is different. Our historical studies are generally the briefest of all our formal exercises and are usually confined to summaries. In psychology, especially, there is a tendency to divide the season of inquiry into a bright experimental one and that gray and sullen eon that kept truth hidden until laboratories brought the light. We put off the day when the findings made possible by these laboratories meet those "necessities of the case" which make them "metaphysical." It might not even be too harsh to say that we avoid, consciously or otherwise, the very forms of inquiry that are likely to unearth these necessities.

Whatever the brooding and unreachable motives may be, I leave to those better suited to such matters. The *fact* we have to deal with is the growing distance between contemporary psychology and its moorings; the growing distance dividing today's psychologist from the achievements of those who created his discipline. It is a fact that presents a problem, and it is to this problem that the present volumes are addressed. The modern psychologist labors under the burden of specialization, a burden that does not permit his eyes to wander too far beyond the prosperous if tiny kingdom of his interest. And we may add to this burden the effects that fashion and commerce have had on the general availability of many of the most significant contributions to psychological thought. That all this has become more widely perceived can be seen in the appearance of the multitude of secondary sources and burgeoning anthologies meant to facilitate periodic excursions back to psychology's original ports of embarkation. Yet, it is a paradoxical measure of the success of

these ventures that, increasingly, secondary sources and anthologies are held in marginal and only grudging esteem. They have driven readers to the primary works, and the readers, thus enlightened, have come to question the aptness of interpretation and the aptness of selection displayed by historians and anthologists.

It would not be correct to say that the mounting distrust of texts and collections has diminished their authority. Rather, the distrust has weakened the real contributions such editions can make while not significantly protecting readers from the damage they can do. Secondary sources are *exegetical* by nature and can be, therefore, nothing but handbooks if they are not animated by a personal perspective. Accordingly, a text on the history of psychology *succeeds* when its reader finds himself disagreeing with this or that interpretation. Only when one recognizes that any worthwhile secondary source is an original work in itself is one likely to redeem the assets and avoid the liabilities of the genre. But to be repaid by the originality of such editions, the reader must be fully conversant with the primary sources under consideration. Ideas and issues of moment are not easily assimilated. The burden can be lightened by sharing. This, then, is the aim of exegetical writing; not to introduce the reader to ideas and issues but to provide yet another perspective against which he can test his own. And this is precisely the reason that secondary sources are such poor devices for introducing readers to the literal, unadorned, and faithfully rendered thoughts of others. The reader who is utterly ignorant of the original expositions necessarily cannot have any perspective on them and, as a result, can only take on faith the validity and the fidelity of the secondary treatments.

That this has not gone unnoticed can be discerned by anyone who has watched the steady procession of anthologies marching forth from every major publisher in the Western world! It would be arduous, indeed, to locate a major figure in the history of thought whose books or essays have not been excerpted in the past twenty years. Nor is this a fact to be despised since anthologies of the sort in mind serve the useful function of allowing the reader to test the waters before taking a headlong leap. Nonetheless, this overall approach must be counted as even less desirable than introductions given by exegetical writing. Anthologies may conceal—but they do not eliminate—the mixed blessing of *interpretation* since the anthologist still stands as both bridge and barrier to the original works. Moreover, the principle guiding the preparation of such collections is that of

economy of effort, a principle which often serves the reader at the expense of the authors whose great and careful works have been boiled down to a few conclusions—with all the analysis boiled off.

A moment's reflection is enough to convince the wary mind of the problems courted by those who rely upon such collections. The history of ideas, even in its fullness, does not offer a broader range of opinion on most matters than the range embracing the commoner spheres of conviction. As a result, little more than vanity is served or abused when we learn only of the conclusions reached by the better minds of history. The value of study is not to be found in statistical tabulations or the voting patterns emerging from three millenia of reflection. If the labors of the scholar are to be repaid, he must pursue the lines of argument and analysis followed by others and compare these with his own. What matters more than the conclusions reached are the methods and the reasons invoked in their defense. The mere fact, if it is a fact, that Socrates believed in the existence of innate ideas or that Leibnitz was a "psychophysical dualist" or that Thomas Reid's philosophy conformed to the canons of his Presbyterian faith can have little standing in the courts of inquiry. Facts of such a sort are, at most, *biographical* and only loosely historical. They bear the same relationship to a knowledge of the thoughts of another as a street address bears to a knowledge of the life lived by the resident.

Where choice must be confined to excerpted works or secondary elaborations, the latter may well be more safely advised. It is doubtful that a serious author would prefer to be judged on the basis of several pages copied from his *magnum opus* than to be ignored entirely. And it is just as doubtful that the prepared mind would spend itself on the authorship of three hundred pages of text if the point at issue could be settled in three. Human history, as Collingwood teaches, is the history of thought. Human history is a history of actions and these, if they are to be more meaningful than simple reflexes, proceed from *reasons*. But in noting this, we offer no veiled endorsement of what has come to be called "psychohistory." When we seek, for example, Giordano Bruno's reasons for subscribing to the Hermes legends, we are concerned as historians not with Bruno but with ourselves, with human invention at large. To the extent that Bruno's convictions can be explained by the unique details of his life, his convictions cannot be of any general and historically informing value. We assume, that is, that Bruno's defense of his beliefs would proceed along rational and not autobiographical

lines; that he would urge upon us an argument and not a "revelation"; that he would set forth an analysis and not merely a diary. To inquire into the factors that may have led Bruno to the path he subsequently followed is to study Bruno. To review his defense of this as the right path is to study history. Those who accept this distinction will need no further warnings in the matter of excerpts and will readily agree that the value of an abridged work decreases in proportion to the degree of abridgement.

In assembling materials for *Significant Contributions to the History of Psychology* I have not by any means overcome all the objections stated or implied above. Each volume reflects, after all, what *I* judged to be a significant contribution and there are, no doubt, many missing volumes which could have given readers access to works others would judge to be superior to those I have chosen. By way of explanation and apology, therefore, I should summarize the criteria governing my selections. And I should quickly add that I have not even been undeviatingly loyal to these. To avoid being overly actuarial, I will say only that each selection satisfied at least two of the criteria and three quarters of the selections satisfied all of them.

The criteria, themselves, can be stated briefly but only defended at length. The first of these is, of course, the *significance* of the work in question. Of the several criteria, this is the only one that is dependent exclusively on judgment. I consider a work significant to the history of psychology when it is addressed to an issue or method which neither contemporary psychology nor any plausibly imaginable system of psychology can ignore. Broadly set forth, these issues and methods include—but are not limited to—cognition and affect, experience and action, and the ontogenetic and phylogentic manifestations of these. Surrounding and often penetrating each of these, we will find recommended methods of investigation and proof and these, too, become celebrated issues in their own right.

An issue may be significant but still treated in an unworthy manner. A subject such as hypnosis or "animal magnetism," for example, enjoyed such popularity in the nineteenth century that one could easily fill thirty volumes with articles and books devoted to it. It is not ungenerous, however, to observe how many of these articles and books failed to shed light on the causes, uses, or importance of the phenomenon. Many expositors limited their assessments to the analgesic powers of hypnotism; others fixed their enthusiasms to its putative spiritual significance; still others sought to find God through its application. We do not

find modern psychology's indebtedness to the nineteenth century by examining works of this kind. Here, again, we face the burden of judgment: Given this or that issue to be an important one, has it been ably served or has it been obscured by this or that treatment of it?

In addition to the significance of the issue and the aptness of the treatment, I have been guided by the criterion of *accessibility*. This criterion can be applied with more objectivity than the first two, but judgment is not entirely suspended. I may illustrate this with a question: How accessible is the recently reprinted essay of 200 pages which is priced at $40.00? Fortunately, in only a few instances has it become necessary to include in these volumes works which, in being made *physically* accessible, have been rendered *economically* out of reach. But there have been more than a few—though still not many—instances where inclusion has been warranted because of the poor quality of recent republications or because the republications have been so destitute of editorial comment as to render the work unintelligible to all but experts. Both of these latter considerations are rough measures of the actual accessibility of a work. The relevance of the quality of production is too obvious to need discussing, and only a few words are in order in regard to editorial contributions.

Active minds are often changeable, and the views expressed in one major work may be qualified or even abandoned later. It is also the case that an author relies on the attitudes and the ordinary acceptations of words and phrases prevailing among his readership. In a different and later century, such attitudes may have few adherents and what was once an ordinary acceptation may have become extraordinary or even unknown. It is the editor's task to anticipate problems of this sort which the modern reader may confront; to alert the reader and to translate for him the older attitudes and locutions into a familiar language. And here I do not use the term "translate" metaphorically but literally. The editor's PREFACE has, among its varied duties, that of providing a conceptual Lexicon, one that establishes the intellectual and broad social boundaries within which the older works were fashioned. In the absence of such a Lexicon, "old" and "dated" become synonymous. To conclude, then, I note that in some instances I have chosen material which, though available in a recent reprinting, is *conceptually* inaccessible to all but those who have mastered the period.

Of course, the most confidently applied measure of accessibility was that emerging from a careful study of the National Union Catalogue, which yields a sufficiently precise assessment of how readily obtainable a given edition is. Without going into details, I will only say that the works offered in these volumes would, with the noted exceptions, be extremely difficult to obtain at all but the major national and university libraries. Indeed, many are not to be found even in the majority of these.

Those who examine all the volumes will note also that a number of original translations have been included. These were subjected to the same criteria that guided the balance of the selections. In addition to these original translations, I have, of course, included many non-English works translated at or near the time of their authorship. But in mentioning these facts I would not want to create the impression that an "international" flavor was either sought or achieved. For reasons that can only be set forth in far more space than the present occasion provides, the significant contributions, in modern times, to the history of psychology have come almost entirely from those quarters in which the scholar's language has been English, French, or German. One hopes and trusts that this will no longer be a fact decades hence when the native genius of men and women the world over is nurtured by those peculiar conditions on which the inquiring mind depends.

The last and most arbitrary criteria are those of *period* and *organization*. In regard to the first, I shall state but not defend the decision to confine selections to works authored between 1750 and 1920. There is nothing historically compelling about the choice of the earliest date except that, before 1750, works of a psychological nature are actually and purely philosophical. I needn't defend the significant contributions made to modern psychology by Aristotle, Descartes, et al., but in the case of such extraordinary figures, the happy availability of their writings removed them from consideration. Clearly, the period of greatest fertility *vis à vis* modern psychology is the nineteenth century and especially the second half. This is a fact honored by the space devoted in these volumes to that period.

A project involving 28 volumes and nearly 200,000 pages presents an editor with grave organizational problems. In no case is a work completed in a second volume, this to serve the reader's convenience and to save his expense. Add to this the desire to keep all volumes roughly equivalent in size and it soon becomes clear that some juxtapositions will be less than apt.

Mechanical solutions to this problem were all unfitting. Neither an alphabetical nor a chronological organization satisfies the aim of the project or the constraints imposed by the realities of production. Thus, to every possible extent, I have tried to give each volume a *thematic* integrity and I have bolstered this attempt by dividing the entire collection into *series*. The reader who is willing to overlook my failures here and to focus attention on the selections themselves will, I am sure, find direction and even inspiration in the writings of bygone but ever eminent psychologists. Nor is it too much to hope that the student of the past will find in these pages but another proof of the timelessness of the human imagination and the arbitrariness of merely temporal divisions.

DANIEL N. ROBINSON

PREFACE

TO ELLIOTSON'S *NUMEROUS CASES OF SURGICAL OPERATIONS WITHOUT PAIN IN THE MESMERIC STATE*, ESDAILE'S *MESMERISM IN INDIA*, AND MACNISH'S *PHILOSOPHY OF SLEEP*

Popular accounts of the history of science are often rather generous in reviewing the achievements of the *Renaissance*, and somewhat grudging in their estimations of the so-called "Middle Ages." Thus, the occasional reader of the history of science is apt to invest too much significance in the mere fact that Copernicus lived during the *Renaissance*, and in the correlated fact that someone like Giordano Bruno would support Copernicanism, and spread its tenets throughout Europe and England.

It is not to undervalue the genius of Copernicus to acknowledge—as he, himself, did—those anticipations of his theory which can be found in times both ancient and Medieval. And in the matter of Bruno's "modernity," the record demands that we recognize this able and spirited polemicist for what he was: a *cultist*, steeped in the mysteries of the East.

The scholars and artists of the *Renaissance* were obsessed with antiquity. It is a credit to their talents that their self-conscious attempts to model themselves after the ancient Greeks and noble Romans so seldom produced mere copies of earlier productions. Their contempt toward the accomplishments of that period which *they* derisively called the Middle Age is lamentable evidence of the intensity of their identification with the pre-Christian world. A more positive, if quaint, token of this is Cosimo de' Medici's founding of a new "Academy" in Florence, and his appointment of Marsilio Ficino as its revived Plato. But the reverence did not stop with Platonism; it sought its objects in the ages before Plato and Socrates—even before Pythagoras.

We can only imagine the excitement provoked within the Florentine "Academy" by the unearthing of the *Corpus Herme-*

ticum, a manuscript thought to contain the oldest Egyptian rites, remedies, and maxims. Here, it was believed, were the truths upon which Pythagoras based all his philosophical and religious propositions; i.e., all that would subsequently be refined first by the Platonists and then by the first Fathers of the Church. Ficino titled his translation of the work the *Pimander*, and it soon gripped even the most astute scholars of the period, convinced that the document contained the wisdom of Zoroaster, and of his son, Hermes.

I need not summarize the great dietary and ritual "truths" of this book—whose actual authorship is no earlier than the second century of the Christian period—but I must note that a heliocentric theory is integrally related to a fair share of the entire Hermetic system. And I note this in order to alert the reader to the fact that it was *this*, and not science, that attracted friend Bruno to Copernicus' theory. Indeed, Bruno found it necessary to rebuke Copernicus for not having seen the connection between his limited astronomical theory and the larger spiritual implications of *Hermetism*.

What we discover in all this is a fundamental tension in the *Renaissance*, a tension too readily passed over by those who would have modern science born in that period. The tension is that between *naturalism* and *spiritualism*, between "natural magic" and "spiritual magic." That the Renaissance failed to relax this tension is illustrated not only by the witch-hunts and demonology so abundant a century later, but even in the otherwise urbane courts of Elizabethan England and the otherwise brilliant expositions of Francis Bacon. Thus, modern science, as the contemporary Western world recognizes it, is not the gift of the Renaissance; it is a triumph over the dominant perspective of Renaissance scholarship. It is, then, the surgical separation of "natural magic" and "spiritual magic," a separation which produced *naturalism*.

To call the modern reader's attention to the conflict between Nature and Spirit is to adopt terms that might give any analysis the burden of datedness. Most educated men and women, no matter of what religious or anti-religious persuasion, tend to think of this conflict as one settled by Newton and Galileo, or—at the latest—by Darwin. But the historical record will not support this view. Newton was uncompromising in his conviction that the laws of science were written by a higher authority. In his non-technical writings, he offers numerous examples of the staying-power of "natural magic." And Galileo's religious

orthodoxy would never be questioned, were it not for the fact that he was forced to defend it. The point I wish to make, however, goes beyond the particular scruples of famous men of science. The point I wish to make is that the divorce between the Religion of Nature and the Religion of Spirit has never been complete from the perspective of the majority of people, and has only become complete within the scientific community relatively recently. Vitalism, spiritualism, clairvoyance, psychokinesis, prescience, and communion between the living and the dead were issues seriously contended *by scientists* only a century ago. And, in saying this, I do not mean to suggest that any of these issues has now been so thoroughly resolved as to place it beyond the range of dispute, scientific or otherwise. What has taken place, however, is one of the seasonal triumphs of naturalism over spiritualism, such that the accepted terms of a renewed dispute are scientific, naturalistic, experimental. The contemporary scholar, whether or not a scientist, is, on the whole, given to naturalistic interpretations over mystical ones, as he is given to scientific modes of verification over revelation. Faced, then, with what seems to be a contradiction of the canons of naturalism, he is likely to suspect either self-deception, ignorance, or error as the cause.

The triumph of naturalism, always what I have called a *seasonal* one, is particularly tentative in the realms of psychology and biology. Neither of these disciplines can ground its facts in principles as firm as those which define modern physics and chemistry. And in psychology, there is the additional obstacle: not only does the discipline lack firm principles, but its subject-matter seems especially immune to the very possibility of such principles. Of course, to the extent that modern psychology is, in some sense, a *scientific* psychology, these obstacles had to be either overcome or ignored. Those who sought to develop a scientific psychology had to demonstrate that the methods and the perspective associated with naturalism were applicable to the psychological phenomena of human life. The more richly "psychological" these phenomena were, the more severe was the task for the founders of scientific psychology. And what is more "psychological" then altered states of consciousness? If psychology is to join the ranks of Nature and resign from those of Spirit, it must establish that what was thought to be the property of the latter really belongs to the former—or it must leave some of its historic issues behind. Leaving the issues behind is, of course, the easier alternative; thus the success of behavioristic formulations! But the only valid test of the naturalistic claim

is that which requires the psychologist to accept psychological phenomena as he finds them, and to demonstrate that, properly understood, they are natural phenomena. This is a test which Elliotson, Esdaile, and Macnish were willing to take, and, as a result, the phenomena of hypnosis, sleep, and dreams were not abandoned as the nineteenth century hosted the development of scientific psychology.

It was Paracelsus (1493-1541), another Renaissance "scientist," who popularized the view that magnetic bodies could influence the life-processes of those brought within the sphere of their influence. These *Hermetic* ideas were accepted, wholesale, by Jan Baptista van Helmont (1577-1644), a prisoner of the Inquisition, a noted and notorious physician, and an Alchemist of meager success. He subscribed to the vitalist doctrine of life, and extended it to include specific life-forces for each of the major organs of the body. But more to our point, he argued (*Hermetically*) that living systems give off magnetic radiations and that this *animal magnetism* is a means by which the spiritual processes of one individual can affect those of a neighbor. It was not long before the expected shamans incorporated such views into their miraculous therapies. This part of the "animal magnetism" movement reached its culmination in the lectures and essays of Friedrich Anton Mesmer (1734-1815), the Austrian physician from whom *mesmerism* draws its name.

Hermetism never dies, it merely fits itself to the needs of successive generations. Mesmer looked to astrology for assistance in his medical practice. In this, he was no different from the physicians of Egypt in the First Kingdom, or from Greek physicians not of Hippocratic (empirical) persuasion. But Mesmer's was the age of *Enlightenment*, in which science was to replace simple faith. Mesmer, accordingly, sought the *natural* causes of astrological influence! And it was these searches that brought him to experiments with magnets, and to the discovery of methods for inducing hypnotic states.

From the beginning, Mesmer found it difficult to avoid the jealousies and prejudices of his medical colleagues. He attempted to gain a proper hearing for his methods, submitting articles to the appropriate academies and lectures to the appropriate societies. His own use of magnets lasted for, perhaps, a decade, but it seems clear that he never really believed that healing powers were in the magnet, per se. Rather, like Paracelsus and van Helmont, he was convinced of the ubiquity of cosmic forces which could be focused on the individual and which could interact constructively with the patient's own magnetic emanations.

His unpopularity in the official circles of Vienna caused him to set up his practice in Paris, where he introduced still another unorthodox therapeutic device, the *baquet*. Hermes, himself, would have been in awe of this cauldron of chemicals, mysteriously ornamented with magnets and metals. But by now (c. 1780), Mesmer had dropped even the trappings of professional sobriety, and had adopted the fabulous garb and manner of the Hermetic *Magus*. Here in Paris, in the decade preceding the great Revolution, in the decade filled with the loftiest ideas and hopes of civilized men—here in this city hosting Jefferson and Paine, and boasting of the keenest patrons of reason the modern world had produced—we find an Austrian exile, cloaked in the robes of the high priest, leading a circle of magnetized devotees in the ritual of the *baquet*. Mesmer and the *philosophes*—Spirit and Nature!

The failure of the several French commissions to discover anything of medical or scientific worth in Mesmer's claims did not deter the public at large. Paris, London, and New York were soon aglitter with Mesmeric societies. By the 1820's and 30's, it was not uncommon to see citizens attempting to *mesmerize* one another on public thoroughfares. Predictably, as the public enthusiasm grew, the official condemnation was ever more adamant. But with so many practitioners, and with so many claims of a dramatic nature, one could not expect the entire medical community to remain united against the technique. What was needed, if the method was to be salvaged, was just one physician of high repute to display some interest and confidence, and this was precisely the part played by John Elliotson (1791-1868).

Elliotson was a radical to many of his colleagues, but was recognized as an eminent physician. He was Professor of Medicine at University College, London, a prolific writer, an ardent reformer. Fortunately for the future of hypnosis, some of the daring proposals to which Elliotson had lent his authority were already gaining in acceptance at the time his attention turned to mesmerism. He was, for instance, the first of the British physicians to recognize the value of the stethoscope. Thus, when he lectured on the possible usefulness of mesmerism, he could count at least on a modicum of attention, and could expect something of a hearing even from the more traditional segments of the professional society. Nonetheless, this same society voted to outlaw the practice—a vote that resulted in Elliotson's quick resignation from both the College and its hospital. But in this very act, Elliotson alerted many to the importance he had attached to this new method, and it was not long before many

other physicians—some distinguished—found the possibilities irresistable. James Esdaile leads this list.

The factual records compiled by Elliotson and Esdaile speak for themselves, and the modern reader will, I suspect, be tempted to pay little attention to these records after examining the first pages of the two works presented herein. But I should caution against this on several counts. First, Elliotson and Esdaile are to be accepted as accomplished physicians, trained observers, and men of unassailable professional integrity. We have ever reason and every right to accept the facts set forth by them as facts. Second, the facts themselves are often striking, even by the standards of modern medicine. The surgical procedures include some of the gravest nature; some which seem, to the contemporary mind, as impossible in the absence of general or local anesthesia. Thus, the reader may share my own astonishment in learning of the complete success of mesmeric anesthesia in these cases. But the source of this astonishment is, in part, that growing contemporary literature which encourages us to believe that hypnotic states are really no more than states of heightened cooperativeness or attentiveness; states of *con*scious conformity and obedience. Then, too, the careful reader will find a case or two in anticipation of Charcot and Freud; that is, where the disturbance is of an hysterical sort, although judged by Esdaile to be physiological. Note, for example, the successful relief of the "feeling of insects crawling over the body" (Esdaile, p. xxiii). But more important than these records of therapeutic success, at least to my way of thinking, is the light shed by these works on the general intellectual and scientific climates of the period. One illustration of this particular value in these works is found in Esdaile's cautious disavowal of mesmeric intrusions into the affairs of the mind, a disavowal warranting further attention.

> I have great hopes that my experiments will go far to separate the regions of mind and body, which, it seems to me, have been unnecessarily and perplexingly intermingled by former Mesmeric observers; and this will not only simplify the Mesmeric treatment of disease, but remove the principle objection to it; namely—the necessity of acting on the mind, often injuriously, during the cure of a bodily infirmity. . . . [T]he mind has never been attempted to be influenced by me, nor has it ever been heard of in my practice. (pp. 24-25)

Now just what, the contemporary reader must ask, is this all about? Here is a physician, willing to undertake corneal surgery under the peculiar anesthesia of hypnosis, but unwilling to employ the same method for gaining access to—or, in any way, to meddle with—the mind! But a little further on, Esdaile helps us to understand his position:

> [A]s my principal object is to ascertain how far this new agent is capable of alleviating bodily suffering, I have purposely kept myself from embarking on the troubled sea of metaphysics . . . (p. 27)

What Esdaile seeks to avoid is not really "the troubled sea of metaphysics" but the charge of *spiritualism*. It is Mesmer's fate he will not share, and it is the canons of *naturalism* that he will obey, at all costs. Moreover, he recognizes that a unique obligation attaches to anyone who would invade the sanctuary of the mind, and in this recognition Esdaile reveals to us that general sentiment which Freud will be summoned to challenge.

I noted earlier that the tension between Nature and Spirit is an abiding one, and that relaxation between them or the triumph of one over the other is invariably seasonal. Elliotson and Esdaile are but additional examples of the general proposition. Both are men of science, trained and practicing in the century of Bell, Flourens, Magendie, Helmholtz, Müller, and Darwin. Both are committed to the side of *Naturalism*, and are declared enemies of *Spiritualism*. And with all of this, we find Esdaile studying the effects of "mesmerized water" (p. 156 ff.) and discovering that patients who drink it are overcome by trance; this from one who eschews "the troubled sea of metaphysics." Since Esdaile was persuaded that mesmerism, itself, was based upon the emanation of mesmeric energy, he found it plausible that this same energy could be transferred to inanimate objects, including water. In this, he was on the side of Paracelsus, van Helmont, and Mesmer, himself. The Newtonian "action at a distance" provided sufficient scientific precedent, and no one would consider *gravity* as a metaphysical entity. The mind, of course, was quite another matter.

Elliotson's journal, the *Zoist*, and Esdaile's writings thrived not much longer than the advent of chemical anesthetics. The revival of mesmerism introduced a half-century later by Charcot and others was based upon the need to treat inoperable neurological patients—inoperable because of the absence of any apparent neurological lesion. And, after Freud abandoned the

method, mesmerism lost its grip on the only other medical interest which might have kept it alive. It was no longer needed as an anesthetic; it was no longer acceptable as a psychotherapy. Freud, too, thought it perilously close to "metaphysics." But hypnotism, as we now call it, has survived in a form rather different from its original one. It is no longer a potential boon to surgery nor is it an integral feature of the treatment of hysteria, but it persists as a *phenomenon*, and as one which theoretical psychology cannot ignore. Gone are the *baquet*, the talismans, the chants, and the mesmerized waters, but the altered state of consciousness persists, and the modern psychologist must address it. He, too, prefers to do so within the naturalistic context, siding as it were with the angels. Unlike Elliotson and Esdaile, however, he proceeds without a theory, and therefore finds himself merely repeating the effect. Nonetheless, the entire area—now combined with "transcendental meditation," "biofeedback," and other neo-Hermetic influences—continues to engage the imagination of the psychologist, and, to this extent, the contributions of Elliotson and Esdaile are historically significant.

Robert Macnish is not nearly as well known as the leading mesmerists, although his *Philosophy of Sleep* saw many editions and translations for decades after its initial publication. Historians of ideas are properly interested in facts such as these; that so influential a work as Macnish's would all but disappear from the scholar's bookshelf long before the less modern contributions of an Elliotson or an Esdaile. In the case of the *Philosophy of Sleep*, there are two major reasons which I would urge upon the reader. First, as I shall discuss below, Macnish tied his entire analysis of sleep and dreams to Gall's *phrenology*, and this was a fatal decision. Indeed, the last printing of the work coincides with the disappearance of most of the journals of phrenology. But equally important was the appearance of Freud's monumental contribution to the psychology of sleep, a contribution which eclipsed all earlier essays devoted to the same topic. Thus, by the last two decades of the nineteenth century, phrenology had fallen on such hard times that even allied perspectives could not attract disciples, and, in 1900, *Die Traumdeuting* appeared, rendering sleep and dreams an integral feature of the most important development in the history of theoretical psychology.

It is far from clear that Macnish would have resisted either of these forces. His loyalty to phrenology was but a manifestation of his more general commitment to naturalism, his more

general disavowal of "metaphysics." Thus, to the extent that phrenology was undone by the methods of science, and to the extent that Freud labored to base sleep and dreaming on a scientific foundation, Macnish could only have applauded the developments. Indeed, he not only would have applauded the first of these, but would have claimed some part in the second.

"So far as I know," says the author, "this is the only treatise in which an attempt is made to give a complete account of Sleep." And the account he offers is designed to be conformable with the known physiology of the nervous system, and of the body at large. The account, then, is to be a *scientific* one, intended to replace the many fabulous theories and superstitions brought to bear upon this most natural of states. Given this orientation, Macnish finds himself persuaded by the hypotheses of Dr. Gall. A few remarks are in order on why this was so.

The term "phrenology" to the modern psychologist is likely to excite whimsy. It seems at one with "demonology," "clairvoyance," and "palmistry." Students remember its central tenets by dubbing it *bumpology*, and journalists pride themselves on their modernity by identifying with it anything they consider to be unscientific. Even those aware of Gall's stature as an anatomist are wont to dismiss his theory of phrenology as an instance of science run amok. But Gall was no fool, and we deny ourselves access to an important lesson in the history and philosophy of science when we interpret his ideas as if they were proffered by a fool.

The two assumptions which form the foundation of Gall's system are (a) the inheritance of mental faculties, and (b) the localized representation within the brain of these native faculties. It should be noted that neither of these assumptions is disproved by any of the following demonstrations:

1. that "learning" modifies the expression of behavior and the general "character" of the individual personality;
2. that massive lesions fail to produce significant changes in the intellectual or moral capacities of the individual;
3. that Gall's particular choice of "faculties" was incorrect, or unconfirmed, or even unconfirmable.

Gall never suggested that inheritance implied *fixity*. His theory is a theory of *dispositions* according to which a ceiling is placed over the range of possible environmental influences. Gall's theory rejects, for example, the ability of environmental manipulations to qualify the Mongoloid idiot for advanced study

in theoretical physics. It does not proscribe those of average endowment from achieving excellence. Second, to prove that, for example, "acquisitiveness" is not affected by lesions introduced in this or that region of the cerebral cortex is *not* to prove that Gall's theory is wrong; only that one of the predictions is not confirmed experimentally. That is, Gall may have been wrong in his neuroanatomical details, but correct in his general propositions.

Contemporary psychologists examine "hunger" and "thirst" within the context of the electrophysiology and biochemistry of the major nuclei of the hypothalamus; memory in relation to the limbic system; delayed-response learning in relation to the frontal cortex. These and many other studies—indeed, all studies of this *genre*—are compatible with that perspective which Gall made famous. There is no doubt but that he underestimated the subtlety of the problem of localization of function, and that he was grimly naive in the matter of the heritability of psychological phenotypes. But every founder is likely to be guilty of the first charge, and the science of genetics was more than fifty years away at the time Gall formulated his theory.

No defense of Gall, no matter how enthusiastic, can ignore his peculiar conviction: that an individual's "character" can be assessed by palpation of the skull. Even Macnish, whose admiration of Gall stops just short of reverence, rings a note of equivocation here:

> Many persons who deny the possibility of estimating individual character, with anything like accuracy, by the shape of the head, admit the great phrenological principle that the brain is composed of a plurality of organs. To them, as well as to those who go a step farther, the doctrine laid down in the present work will appear satisfactory. . . . These points are only to be ascertained by an appeal to nature. No man can wisely reject phrenology without making such an appeal. (pp. v-vi)

But when we examine the two assumptions cited above, we discover that Gall could have come to no other conclusions. If, indeed, there are "faculties," and if, further, they are inherited, and if, finally, their powers are in proportion to the amount of brain devoted to them, then it follows that, (a) regions of the brain that are abnormally large betoken correspondingly abnormal faculties; (b) these correlations will be evident at birth; (c)

the soft calvarium at birth will be pressed up and otherwise formed by the enlarged areas of brain beneath; (d) the hardened calvarium of the adult will, when properly palpated, reveal the relative masses of the underlying regions of the brain. To note, then, that Gall was hopelessly wrong is not to decide that he was hopelessly foolish. He was not, and Macnish was not in following the major threads of the phrenological theory.

This said, I must call the reader's attention to the fact that Macnish's reliance on phrenology is of an indirect sort. He does not consult every jot and tittle of Gall's theory as he examines the phenomena of sleep and dreaming. Rather, he takes as his starting point that major canon of phrenology, according to which "the brain is the material apparatus by which the mind manifests itself" (p. vi). All that Macnish asks of us is that we agree to treat sleep and dreams as manifestations of mind, and the latter as products of brain activity.

Throughout his work, and consistent with his naturalistic bias, Macnish focuses upon symptoms as revealed by direct observation. A number of his cases were to be cited often in succeeding decades, particularly his cases of somnambulism, automatic writing, and selective amnesias. For it was cases of this sort that gave rise to the problem of "double-personality," and the relation of that problem to the general issue of *self*. From the time of the ancients, the question of the defining properties of an individual enjoyed debate and analysis. ("Is Socrates standing and Socrates seated the same Socrates"?) But it was not until Descartes' famous *Cogito* that philosophers recognized the more vexed dimensions of the entire issue. The British empiricists, especially Locke and Hume, tended to be satisfied with a memory-criterion of self-hood: Smith is the *same* Smith to the extent that there is a continuity of memory, a recognition on Smith's part that, indeed, *he* was the man who went to the concert last Thursday.

But what, then, are we to say of the somnambulist, who rises in the middle of the night, engages in complex and apparently purposeful activities, of which he is subsequently and completely ignorant? Is there another "self" to take into account? And, if not, how can the single self be held responsible for that of which it is oblivious?

The problem of "personal identity" is still alive in philosophical circles, and there is nothing in Macnish's text to suggest that he was sensitive to the larger ramifications of it. Nonetheless, his was one of several books which provided the case-ma-

terials that Binet and others would wrestle with as they examined the problem of "double-consciousness." Somnambulism, mesmerism, states of fever and disease all figured in this development—a development that would come to include theories of schizophrenia and multiple-personality as well.

As Macnish proceeds with his analysis, he treats us to a careful delineation of the variety of natural factors governing sleep and dreams: diet, exercise, disease, intelligence, phylogenetic status, time of day. In fact, his account is so numbingly "naturalistic" that we long for a Freudian respite. Alas, our longings are heard:

> The power of imagination is perhaps never so vividly displayed, as in those dreams which haunt the guilty mind. When any crime of an infamous character has been perpetrated, and when the person is not so utterly hardened as to be insensible of his iniquity, the wide storehouse of retributive vengeance is opened up, and its appalling horrors poured upon him. In vain does he endeavor to expel the dreadful remembrance of his deeds, and bury them in forgetfulness; from the abyss of slumber they start forth, as the vampyres start from their sepulchres, and hover around him like the furies that pursued the footsteps of Orestes; while the voice of conscience stuns his ears with murmurs of judgment and eternity. Such is the punishment reserved for the guilty in sleep. During the busy stir of active existence, they may contrive to evade the memory of their wickedness—to silence the whispers of the "still small voice" within them, and cheat themselves with a semblance of happiness; but when their heads are laid upon the pillow, the flimsy veil which hung between them and crime, melts away like an illusive vapour . . . (p. 96)

I offer the quote not merely to whet the literary appetite, less to establish once more how many students of dreams anticipated the great Freud. With it, I hope to convey to the reader Macnish's range as a scholar of his subject, and his commitment to include *all* the phenomena, even if it means that his physiological theories might be embarrassed by the data. For Macnish,

and for all the major spokesmen of psychology in the eighteenth and nineteenth centuries, a commitment to naturalism was not an abandonment of the *mental*. It was, rather, the courageous plan to rescue the mental from that realm of Spirit in which it had resided from antiquity to well into the seventeenth century. Macnish is not timid in accepting the limitations of his own knowledge and the impoverishment of his methods. He is convinced that the mind is part of nature, and that the brain is its organ. In accepting the *mental*, he is accepting what every philosopher, blacksmith, and horsetrader has direct evidence of, every waking moment of their lives. We do not find Macnish attempting to eliminate the mental, but to explain it. And in his explanations, he persists in his attacks on superstition, magic, and fable. Note, as one example, his assessment of the putative prophetic element of dreams:

> This opinion is so singularly unphilosophical, that I would not have noticed it, were it not advocated even by persons of good sense and education. . . . That it is wholly erroneous, however, cannot be doubted; and any person who examines the nature of the human mind, and the manner in which it operates in dreams, must be convinced, that under no circumstances, except those of a miracle, in which the ordinary laws of nature are triumphed over, can such an event ever take place. (p. 102)

Macnish then notes that miracles were, it seems, more common in early times, when God was given to the teaching of object-lessons consistent with his interest in the human race.

> [B]ut if faith is to be placed in modern miracles, we must suppose that God suspended the above laws for the most trivial and useless of purposes—as, for instance, to intimate to a man that his grandmother will die on a particular day, that a favorite mare has broken her neck . . . or that a certain friend will step in and take pot-luck with him on the morrow. (p. 103)

There is a final feature of Macnish's text which tells us something of the period, and, therefore, something of the impetus received by psychology at the time of its modern origins. The

text is something of a "how-to" book, punctuated with guides to the perplexed. We are instructed in the appropriate bedtime habits; in how to avoid nightmare and fretful sleep; in the proper hardness of the mattress and pillow; in the literary preferences that might affect our rest. Themes of this sort are to be found throughout the nineteenth century: in Bain, Binet, Wundt, Ward, Stout, Macdougall, Thorndike, Romanes. Macnish comes early in this development, but his practical bent is unmistakeable. Science is tested in the fires of daily necessity. What is true is useful; what fails, is false. So much has been written on this that one must be disinclined to add further weight to a diary that is already too thick. I will not, of course, burden the reader with gratuitous remarks on the "practical" flavor of Victorian England—an England that comes *after* Macnish's first edition—or on the medical roots of scientific psychology. I would suggest, rather, that Macnish's heightened sense of responsibility in these matters is but another sign of the triumph of empiricism over rationalism in the English-speaking world of the nineteenth century. This triumph was to install *experience* as the ultimate authority in matters epistemological, and *feeling* as the ultimate authority in matters moral. No longer would those grand Cartesian deductions, those perfect Scholastic syntheses, order the lives of the citizenry. No longer would the polity be at the service of what Bentham snidely called *ipsidixitism*. Macnish reflects this attitude as he gives us a guide for the management of sleep and dreams. In their own way, so do Esdaile and Elliotson. With them and with the later psychologists of the nineteenth century, psychology takes that practical turn that will lead to Watson and behaviorism. Fact takes precedence over value; results over reasons. But as the data-base broadens, the possibility of *theory*—that unique if often gaudy gift of rationalism—seems ever more distant.

BIOGRAPHICAL AND BIBLIOGRAPHIC NOTES

John Elliotson [*1791-1868*]

As noted in the PREFACE, Elliotson was a physician of high office and high standing. As with James Braid, the author of *Neurypnology*, Elliotson's interests in mesmerism were triggered by a demonstration given by a visiting Frenchman. In Braid's case, it was the famous LaFontaine; in Elliotson's, Dupotet.

Even though he found himself obliged to resign from the University College Hospital, Elliotson hardly disappeared from the respected circles of English medicine. In 1846, he delivered the traditional Harveian Lectures, named after another once maligned scientist, William Harvey. In his oration, Elliotson found an opportunity to castigate those small-minded and self-serving members of the "official establishment," and, at the same time, to strike another blow for mesmerism.

The *Zoist*, founded and edited by Elliotson, lasted from 1843 to 1856. At the time it was the only journal in which the results of mesmeric therapy could be reported.

James Esdaile [1808-1859]

Esdaile was directly influenced by Elliotson's writings. His medical appointment in India gave him a relatively free hand, since the manner in which Indians were treated did not seem to raise as much concern as that excited by mesmerism in London. Through his efforts, a mesmeric hospital was set up in Calcutta, which was soon shut down, notwithstanding the great and documented success of Esdaile.

Esdaile's tenure in India extended from 1845 to 1851. In this six-year period, he treated hundreds of patients surgically, using only mesmerism as an anesthetic. After his return to Scotland, he continued his researches and his correspondence with Elliotson.

By 1846, both nitrous oxide and ether had been successfully used in surgery, and Esdaile and Elliotson soon would be rebels without a cause.

Robert Macnish [1802-1837]

Macnish was eighteen when he received his Master of Surgery degree from the University of Glasgow. He practiced medicine for less than two years with Dr. Henderson of Clyth, Caithness, leaving partly because of "the need for more congenial society." His travels in France introduced him to Broussais and, alas, Gall. He returned to complete his studies for the M.D. at Glasgow (1825). His dissertation later appeared as *The Anatomy of Drunkenness* (1827). One commentator described the work as one of "considerable pretension," and speculated on the author's personal acquaintance with his subject.

Macnish wrote on many subjects, and his poetry—written in the Byronic idiom—also attracted local attention. Some of his

contributions to *Blackwood* were signed, "A Modern Pythagorean," a fact that is usefully added to his text on *Metempsychosis* (1826). Other works of note are his *Book of Aphorisms* (1839) and his very popular *Introduction to Phrenology in the Form of Question and Answer* (1835), which may have sold as many as 10,000 copies. A compendium of his works was published by his friend and biographer, D. M. Moir, in 1838. Macnish died of influenza during the epidemic of 1837.

NUMEROUS CASES

OF

SURGICAL OPERATIONS

WITHOUT PAIN

IN

THE MESMERIC STATE;

WITH

REMARKS

UPON THE OPPOSITION OF MANY MEMBERS OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY AND OTHERS

TO THE RECEPTION OF

THE INESTIMABLE BLESSINGS OF MESMERISM.

"In the whole domain of human arguments, no art or science rests upon experiments more numerous, more positive, or more easily ascertained."

"To me (and before many years the opinion must be universal) the most extraordinary event in the whole history of human science is, that MESMERISM ever could be doubted."

CHENEVIX.

BY

JOHN ELLIOTSON, M.D. CANTAB. F.R.S.

PHILADELPHIA:

LEA AND BLANCHARD.

1843.

TO

THOSE,

HOWEVER HUMBLE THEIR RANK,

WHO PRIZE TRUTH ABOVE THE FAVOUR OF

THE IGNORANT OR INTERESTED,

AND

FEEL MORE SATISFACTION IN PROMOTING THE COMFORT,

THE KNOWLEDGE, THE VIRTUE, AND THEREFORE THE

HAPPINESS, OF THEIR FELLOW-MEN, THAN IN PROMOTING

WHAT IS COMMONLY CALLED THEIR OWN INTEREST,

THESE PAGES

ARE AFFECTIONATELY INSCRIBED.

CHAPTER I.

CASE OF AMPUTATION OF A LEG ABOVE THE KNEE, WITHOUT PAIN, IN THE MESMERIC STATE.

SECTION I.

DESCRIPTION OF THE CASE.

"I never said it was possible. I only said it was true."—*M. G. Lewis.*

"Le vrai n'est pas toujours vraisemblable."—*Fontenelle.*

On the 22d of November last, the Royal Medical and Chirurgical Society of London assembled to hear read an "Account of a case of successful amputation of the thigh, during the mesmeric state, without the knowledge of the patient," in the District Hospital of Wellow, Nottinghamshire: and voted thanks for it *without a dissentient voice.*

The mesmeriser was W. Topham, Esq., Barrister, of the Middle Temple: the operator, W. Squire Ward, Esq., Surgeon, of Wellow Hall. The patient was a labourer, six feet high and forty-two years of age, named James Wombell. He had suffered for nearly five years from neglected disease of the left knee, the interior of the joint of which was found after the amputation deeply and extensively ulcerated. "*The* SLIGHTEST *motion of the joint was attended by the* MOST EXCRUCIATING *agony;* his nights were almost wholly sleepless, in consequence of the *painful startings of the limb;* his pulse was weak and rapid; his face constantly marked with a hectic flush; his tongue foul; appetite gone;" in truth, when Mr. Topham first saw him, on the 9th of September, "he was sitting upright upon a bed in the hospital; *the only position which he could bear:* he complained of great pain from his knee and of *much excitability* and loss of strength, from his constant restlessness and deprivation of sleep, for *he had not, during the* THREE *previous weeks slept more than* TWO *hours in* SEVENTY."

On this day he was first mesmerised by Mr. Topham, and for five and thirty minutes. "The only effect produced was a closing of the eyelids, with that quivering appearance which so commonly results from the process; and, though awake and speaking, he could not raise them until after a lapse of a minute and a half."

On the 10th he was sent to sleep in twenty minutes. On the 11th "he was suffering *great agony, and distressed even to tears.*" Mr. Topham "commenced by making passes longitudinally, over the diseased knee: in *five minutes* he was *comparatively easy;* and, on proceeding further to mesmerise him, at the expiration of *ten minutes* more he was *sleeping like an infant.* Not only his arms were then *violently pinched,* but also *the diseased leg itself,* without his exhibiting *any sensation:* yet his limb was so sensitive to pain, in his natural state, he *could not bear even the* LIGHTEST *covering* to rest upon it. *That night he slept* SEVEN *hours* WITHOUT INTERRUPTION."

"After constantly mesmerising him for ten or twelve days, a great change was observed in his appearance. *The hue of health returned; he became cheerful; felt much stronger; was easier, both in mind and body; slept well, and recovered his appetite.*" So great was the change, that Mr. Ward, after having been absent from indisposition, "was as much *astonished,* on his return on the 27th of September, about three weeks after the commencement of the mesmerism," as

he "was *delighted* to observe the *improved condition* of the man;" and, had he "not known the previous history of the case, *much doubt must have arisen in his mind, as to the propriety of immediately amputating the limb.*"

"On the 22d of September the patient was first apprised of the necessity of an early amputation. The communication seemed almost unexpected, and *affected him considerably*, and *destroyed his natural sleep that night.*" The next day he was still "fretting, restless, and in consequent pain." Yet he was put to sleep mesmerically in four minutes and a half.

Like many other susceptible patients, he could now be affected locally when in his natural state,—without coma. For example, passes without contact along his extended extremities would render them so rigid as not to be bent by mechanical force short of danger, though breathing upon them constantly caused them to relax and drop to his sides.

Although in this mesmeric coma the sensibility to mechanical causes of pain was so far lessened that violent pinching, and sudden pricking, and of even the diseased limb, produced no evidence of sensation, and he lost all pain in his knee while this was in perfect rest, the exquisitely sensitive interior of the diseased joint was not proof against the torture of motion, which, however slight, agonized and awoke him. In many cases I have seen excruciating internal pain of nerves, inflamed or otherwise under disease, give evidence of its fierce shootings by the sudden agitation of the frame, expression of the countenance, and catching of the breath, when there was not sensibility enough for sensation from pinching, pricking, cutting, tearing, or even burning; the excruciating internal pain not awaking them unless when at the very highest intensity, or when the coma was not at the greatest depth. When there is exquisite tenderness of a part, as in the knee-joint of this poor man, the coma must indeed be profound,—more profound than it seems ever to have been in this case, except perhaps when the precaution was taken of keeping the fingers on the eyes after the operation was begun,—for motion of the part not to cause anguish. At the time of the operation, the 1st of October, it was found *impossible, without such torture as aroused him from his mesmeric coma, to remove him from his bed to the table.* Indeed, his coma was not so deep but that it *was dissipated by attempting to converse with him*; and in general it ceased spontaneously in half an hour, his waking being "slow and gradual and without the least start." Instead of being placed upon a table, he was therefore lifted with his low bed upon a temporary platform, and "he was soon put into the mesmeric sleep, *although he was considerably excited* by hearing the cries of another patient upon whom Mr. Ward had been performing a tedious and painful operation." He was then "drawn by means of the bed clothes beneath him towards the end of the bed." Even this movement excited the pain and awoke him. But the pain soon ceased, and, his limb being "raised about two inches from the mattress" by a surgeon present (Mr. Wood), who "rested the heel upon his shoulder and supported the joint with his hand," he was mesmerised into coma again in four minutes.

Mr. Topham continued to mesmerize him for fifteen minutes, and then informed Mr. Ward that the operation might be begun, and "*brought two fingers of each hand gently in contact with the patient's closed eyelids; and there kept them, still further to deepen the sleep.*" This is a circumstance of no little importance to remember. Of all parts of the body, the eyes are the most ready receivers and transmitters of mesmerism. I noticed this first in the cases of the Okeys; and I may remark that all the exquisitely interesting phenomena which occurred in the *perfectly genuine and wonderful cases* of those two sisters,—I repeat it as emphatically as I can, and hope my words will be read by the uninformed, and presumptuous, and cruel writer of an article in the present number (CXLI.) of the Quarterly Review, who exclaims, "how many grave persons were deceived by the impostures of the Miss Okeys of St. Pancras,"—the *perfectly genuine and wonderful phenomena* of those two sisters, I have verified again and again in numerous other cases, some in one, some in another. The moist mucous

membranes are more susceptible than the skin; and of membranes, the surface of the eye and inner surface of the eyelid, to say nothing of the nervous interior of the eye to which there is admission through the pupil to projected mesmeric influence are the most susceptible. Intervening bodies impede mesmerism, and, *cæteris paribus*, in proportion to their substance; the eyelids therefore prevent so strong an effect as would result if the mesmerizing body were applied to the eye itself. Still the points of the fingers placed upon the eyelids would have a great effect. The pointed parts of the body, as the ends of the fingers and the point of the nose, I, in the same Okeys and subsequently in others, ascertained to be more powerful in mesmerising as well as in being mesmerised, *cæteris paribus*, than other parts. If the fingers had been kept on the eyelids before the patient was moved at all, he probably would have suffered no more while he was moved than during the operation.

The operation was now commenced. "Mr. Ward, after one earnest look at the man," in the words of Mr. Topham, "slowly plunged his knife into the centre of the outside of the thigh, directly to the bone, and then made a clear incision round the bone, to the opposite point on the inside of the thigh. The stillness at this moment was something awful; the *calm* respiration of the sleeping man alone was heard, for all other seemed suspended. In making the second incision, the position of the leg was found more inconvenient than it appeared to be;" and Mr. Ward, to use his own words, "having made the anterior flap," "was under the necessity of completing the posterior one in *three* stages. First, by *dividing a portion of the flap on the inside;* then a *similar portion on the outside.* This proceeding, which was of course far more tedious and painful than the ordinary one, was necessary to enable me to *pass the knife through under the bone and thus complete the whole*, as I could not sufficiently depress the handle to do so, without the two lateral cuts." Yet, notwithstanding all this, the patient's "sleep continued as profound as ever. *The* PLACID *look of his countenance never changed for* AN INSTANT; his whole frame rested, *uncontrolled*, in *perfect stillness* and repose; *not a muscle was seen to twitch.* To the end of the operation, including the sawing of the bone, securing the arteries, and applying the bandages, occupying a period of upwards of twenty minutes, he *lay like a statue.*"

Soon *after* the *second* incision, "a low moaning" was heard at intervals until the conclusion of the operation, that is, after the leg was off and while the arteries were tying and the bandages putting on, giving "to all present the impression of a disturbed dream." That it arose from troubled dreaming I have no doubt; for in the mesmeric coma it is common for patients, *after the lapse of a certain time*, to dream and talk, and especially of any thing which has just before strongly impressed them; and this patient was very likely, and from my experience I should say, was almost certain, to dream of his having soon to undergo the operation, the thoughts of which had so acutely distressed him and must have occupied his mind to the last moment of his waking state. I have at this moment three patients who in the coma always dream and talk of something which has very recently, generally the same day, interested them, or of something they expect on the same day. Had it arisen from the operation, it would have occurred during the most painful periods; would have occurred, as it did not, exactly and only at moments of the proceeding most likely to be painful, whereas it occurred as much at moments when nothing was doing to give pain. The man could not have moaned from pain in spite of himself at moments when there was nothing to make him moan in spite of himself. It would have been increased, and indeed changed to a sudden and louder noise, whenever the end of the sciatic nerve was roughly treated. For, still farther to test his insensibility, Mr. Ward "twice *touched*" and, as he informs me, *pretty roughly and with the points of the forceps*, so that he in fact pricked, "*the divided* end of the sciatic nerve, without any increase of the low moaning." The pain which such an experiment would occasion to a person in his ordinary state must be equal to a strong dart of tic douloureux; and I defy any human being, in his ordinary condition, to be subjected to such an ex-

periment without, not to say an increase of low moaning if he was already moaning, but without suddenly giving some other more decided sign of anguish,—without some interruption to the "perfect stillness and repose of a statue." Mr. Ward further informs me that he "once put his thumb roughly upon the nerve in taking the posterior flap in his hand to sponge, and also used the sponge very roughly." If the man had not been able to bear the pain of the operation without moaning, he would not have been able to retain the *perfect placidity* of his countenance, the *relaxed* and *motionless* state of his *lips* and *hands*, and the undisturbed regularity of his breathing.

The "closed eyelids" quivered to the last, as they so frequently do in the mesmeric coma.

The quivering of the exposed muscular fibres, and the retraction of the divided muscles, were less than usual. probably from the diminution of their irritability by mesmerism.

The mesmeric state of the patient usually lasted half an hour; and after this lapse of time, the operation having been commenced in rather more than a quarter of an hour subsequently to its production, and having occupied, inclusively of applying the bandages, above twenty minutes, he "*gradually and calmly*," as usual, awoke. Some sal volatile and water had just been given to him, and might have contributed to his waking, because his coma, according to its usual course, was probably near its end, and at this period stimuli which proved inert previously might take more or less effect. This, however, is exceedingly doubtful, as the usual duration of his coma was completed, and as he was not suddenly aroused by the sal volatile, and gave no sign of irritation from it, but, on the contrary, awoke "gradually and calmly." In fact Mr. Wood, who mixed the sal volatile and water, assures me that it was very weak, and is persuaded equally with myself that the man awoke independently of it.

"At first, he uttered no exclamation; and for some moments seemed lost and bewildered,"—a characteristic and striking phenomenon so familiar to mesmerists when any visible change in external circumstances has occurred while the patient was asleep. But, after looking around, he exclaimed, "I bless the Lord to find it's all over."

"He was then removed to another room; and, following immediately," Mr. Topham "asked him in the presence of all assembled to describe all he felt or knew after he was mesmerised. His reply was '*I never knew anything more; and never felt any pain at all: I, once, felt as if I heard a kind of crunching.*'" Mr. Topham "asked if that were painful? He replied '*No pain at all; I never had any; and knew nothing till I was awakened by that strong stuff*' (the sal volatile)." Of course the moment he became sensible he must have tasted the sal volatile, and would fancy that it awoke him, and he must have continued to taste it for some time after he was awake. When mesmeric patients awake spontaneously, they continually ascribe their waking to their first sensation, or even to something imagined.

"The crunching no doubt was the sawing his own thigh bone." It is not uncommon for patients in the mesmeric coma, although insensible to mechanical causes of irritation, yet to hear more or less. As there are in mesmerism various degrees of insensibility to mechanical causes of irritation, from perfect to but slightly impaired sensibility, in different cases; sometimes in the same case at different mesmerisations; and sometimes at different periods of the same mesmerisation; and sometimes one part is insensible and another sensible: so there are various degrees of affection of hearing. In some cases patients hear not the loudest sounds; in others, they hear and answer questions; and it is very common for them to hear well at one moment and appear perfectly deaf at another, as the mesmeric conditions fluctuate in intensity; and the state of sensibility to mechanical causes of irritation and of hearing may bear no relation to each other. It would be wonderful were all this not to happen, since the very same observations hold in similar affections of a functional character independent of mesmerism. I

have no doubt that the man did confusedly hear the sawing of the bone in his coma.

"He was left easy and comfortable; and still found so at nine o'clock that night: about which time" Mr. Topham "again mesmerised him (in a minute and three quarters) and he slept an hour and a half."

Two days afterwards, when he was put into the mesmeric coma, Mr. Topham proposed to Mr. Ward, who intended to dress the wound that day for the first time, to take this opportunity; and *the wound was accordingly dressed without the man's knowledge, and therefore without the least pain.*

The man has done perfectly well. Within twenty-four hours after the operation he was singing. In three weeks he sat up to dinner, "and had not a single bad symptom: *none even of the nervous excitement, so frequently observed in patients who have undergone painful operations, and who have suffered much previous anxiety in making up their minds.*"

Such was the artless tale; beautifully true to nature in every incident, and at once recognised as pure truth by all who are not ignorant of mesmeric phenomena, or who do not unphilosophically allow unworthy feelings to supplant their judgment.

SECTION II.

DETERMINATION OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY OF LONDON, THAT THIS FACT WAS NOT A FACT.

"Whilst the unlearned were all busied in getting down to the bottom of the well, where TRUTH keeps her *little* court, were the learned in their way as busy in pumping her up through the conduits of dialectic induction;—*they concerned themselves not with* FACTS,—THEY REASONED."

"'Tis above reason, cried the doctors on one side;
'Tis below reason, cried the others.
'Tis faith, cried one;
'Tis a fiddlestick, said the others.
'Tis possible, cried one;
'Tis impossible, said the others."

Sterne.

No sooner was this most interesting and important paper read,—the most interesting in a physiological point of view, and the most important as to the alleviation of suffering, that was ever brought before the society, than up rose Mr. COULSON, a surgeon practising in the city, anxious to distinguish himself as the leader of the opposition to mesmerism, and asserted that the paper ought never to have been read, for *the only point of interest* was the non-expression of pain, and that was a common thing, and he had no doubt the man *had been trained* to it! While the paper was reading, he had turned round to one of the authors, as to a perfect stranger, without knowing him, as he has confessed to me, and said, "What d——d stuff this is:" so that his feelings were strong whatever was his judgment. Mr. Coulson has also confessed to me since the discussion, that *he has never seen a mesmeric fact and is quite ignorant of mesmerism.* What right therefore has he not to believe that insensibility of touch can be induced by it, as those assert who have seen and practised it for years! Insensibility of all the five senses, or of one or more of them, is a common occurrence of disease. I will adduce, further on, some striking cases, from the Transactions of this very society, of want of the sense of touch only, so that injuries were unfelt. What right then has he, totally ignorant as he is of mesmerism, to assert that the same conditions cannot be induced by the artificial processes of mesmerism!

The only point of interest was the non-expression of pain! It was not worthy

of Mr. Coulson's attention, that the poor man *before* being mesmerised had not during *three weeks* slept more than *two* hours in *seventy*, but that *after* having been mesmerised three times, "he slept seven hours without interruption;" that after having been mesmerised about a dozen times a great change was remarkable in his appearance, "*the hue of health returned*, he became *cheerful*, felt *much stronger*, was *easier* both in mind and body, *slept well*, and *recovered his appetite*,"—that he looked "healthy and cheerful, his natural sleep was sound and regular, and his pain soothed and diminished;" that the surgeon, Mr. Ward, after having been absent while Mr. Topham thus mesmerised him, declared "I was as much astonished as I was delighted, to observe the improved condition of the man; he had now much more the hue of health, his nights were more tranquil, his appetite had returned, and in fact such was his state that had I not known the previous history of the case, much doubt must have arisen in my mind as to the propriety of immediately amputating the limb."

All this was beneath Mr. Coulson's consideration. The only point of interest was the non-expression of pain! A friend, formerly a pupil of my own, Mr. Case of Fareham in Hampshire, thinking more rationally than Mr. Coulson of the facts of this case, determined to endeavour to render a woman, two and thirty years of age, insensible to pain previously to the amputation of a thumb, that had for some time been greatly diseased after an accident, resisting all treatment and severely injuring the constitution, which had long previously been in a state of debility and thus occasioned the bad condition of the thumb, that in its turn reflected injury on the constitution. But, *after he had mesmerised her daily for ten days, the improvement was so great that amputation appeared unnecessary*, and in a short time *the thumb was absolutely well*, and her health improved so much that she declared she had *never* been so well and strong. The improvement of the general health,—the strength, the digestion, and the female functions, &c., from mesmerism is generally great, to say nothing of its power over various diseases, medical and surgical. A surgeon in Warwickshire, who was about to amputate a leg severely diseased, as in Mr. Ward's case, and, wishing to prevent pain, had been mesmerising the patient with the effect of such coma and insensibility in three minutes, that the man showed no pain and made no movement when goaded with a pin, when burnt with a hot iron, or when blazing sealing-wax was dropped and allowed to burn upon his limb, wrote, in a letter to Mr. Ward,—"as in your case, *the man's health is wonderfully improved since mesmerising him.*"

Then Mr. Coulson believed that the man had disciplined himself to bear pain without expressing his feelings. And what reason had he for all this credulity? The poor man complained of great pain and could never bear any other than the sitting position for pain; had slept but for two hours in seventy during three weeks for pain; was invariably awakened from his mesmeric sleep by violent pain; could not bear the "lightest covering" on his leg, when not in mesmeric coma, for pain; even shed tears from his intense agony; was greatly affected when the necessity of the operation was announced to him, and, in consequence, could not sleep that night, and the next day was fretting and restless; suffered, *the very morning of the operation*, such anguish from the slightest movement that it was found impossible, without needless torture, to place him upon a table; and, on being drawn towards the foot of the bed with the bed-clothes under him for the convenience of the operator, such pain was produced that he awoke,—"There was something quite excruciating in the suffering which the state of the knee produced *at this moment*;" and immedediately before the operation he was considerably excited at hearing the cries of another patient who had just been operated upon in the next room. Truly he was well disciplined to bear pain! On waking from his mesmeric coma after the operation, he was filled with joy to find his anticipated sufferings were not to come, and exclaimed, not like a man who despised pain and was trained, "I bless the Lord to find it's all over!" Not bearing pain at all better on the day of the operation than when admitted into

the hospital; being, on the contrary, very sensitive of pain, and irritable, he is unhesitatingly pronounced by Mr. Coulson, without a shadow of ground, from mere prejudice, ignorance, and want of penetration, to have been disciplined to bear pain,—to be an impostor, and the barrister and surgeon to have been his dupes or accomplices. Such folly is monstrous.

Dr. Moore, a physician-accoucheur, living in Saville Row, immediately followed, and made no objections, but protested, in a loud voice and rapid manner, that really such a statement ought to have been accompanied by affidavits, and asked if affidavits before the Lord Mayor or some other magistrate had been made. Dr. Moore has the distinction of being the first person who, in a scientific society of gentlemen, required that the detail of philosophical experiments should be supported by affidavit. He had, however, equally forgotten himself last summer at the Phrenological Association, having been for some time in an incessant state of distressing morbid anti-mesmeric irritation, without knowing more of the subject than its unpopular name, and conducting himself precisely in the way in which he complains, as a phrenologist, that the medical profession conduct themselves towards phrenology. When several gentlemen had related most curious experiments in which, during the mesmeric state, individual cerebral organs were at pleasure excited or stupified mesmerically, he exclaimed that it was a very pretty thing indeed for gentlemen to come down and tell us that they had seen this and that. I replied that no experimenters could do more at a public discussion, or in writing, than detail their facts faithfully, and put others in the way of repeating their experiments: and he was at once put to silence for the night.

Thus Dr. Moore made no objections, but called loudly for affidavits and then sat down again. No other notice was taken of this speech than to laugh at it.

The next in eagerness to speak was Mr. Blake, a young surgeon. He urged that this man shammed, because persons often bear operations without expressing pain: and mentioned that he had seen a tooth extracted from a girl who was not, but pretended to be, in the mesmeric state, in University College Hospital, without any sign of pain, although she was strictly observed and *even her pulse felt.* Now he knew well formerly, for he was present as well as myself, that a friend of his, who counted her pulse during the extraction, declared to us all, truly or not I cannot of course say, that the pulse rose eight beats during the extraction.

Another young surgeon named Alcock, followed in the same line of argument; not thinking that the absence of pain ever admitted of evidence, and discrediting the reality of the case because he had often seen persons in an ordinary state bear severe operations without manifesting the slightest pain. Now I do not believe it. No doubt Mr. Alcock thinks he witnessed such self-command; but I do not believe he observed with sufficient minuteness. I, during a period equal to three years, while a student at the two hospitals of St. Thomas and Guy, saw a very large number of operations, as these were both great establishments and close to the river and in a very crowded district, as operations were then far more frequently resorted to than at present, and as Sir Astley Cooper was surgeon to one of them and his glory was to operate, and I do not know that I was absent from a single operation. Yet I never witnessed such a prodigy as apparent *total* indifference to pain. I recollect a sailor astonishing Sir Astley Cooper by not uttering the faintest sound while his leg was taken off: but the man folded his arms firmly together and his *lips were firmly compressed.* No one will doubt the high courage of the Marquess of Anglesey. While his leg was amputated he uttered not a sound. A bystander, might have supposed that he felt no pain. But the brother officer, whose hand he held all the time, told a clergyman, a friend of mine, that he never had such a squeeze in his life. Some who have uttered no sound have held their own thigh during an amputation of the leg: but then they could give silent vent to their sufferings by squeezing the limb. Some, when under the surgeon's hand, keep their jaws or lips firmly closed, some sing, whistle, chatter, laugh, or smoke, all the time, and thus find relief. I knew

an old clergyman who had senile gangrene of a toe, to which Sir Astley Cooper frequently applied nitric acid, and he told me that, not liking to cry out and not being able to swear, he always relieved himself in his agony by spouting a sentence of the Philippics,—ὦ ἄνδρες Ἀθηναῖοι, &c. Savages, criminals, and martyrs in different causes, have in all ages borne torture bravely, defying pain. But then they have laughed, prayed, sung, talked, or performed some other muscular motion: or, although silent and still, would, I have no doubt, have betrayed to a good observer some sign of suffering or determination in their breathing, lips, closed jaws, or fixed look,—in acting strongly with some part of their body. If a man has held his hand in the fire, he has held it firmly. Dr. Barnes, of Tavistock Place, who was acting surgeon at Macquarie Harbour during 1826 and 1827, for nineteen months, informs me that he saw in all 17,000 lashes given in that penal settlement. The whip had a wooden handle a foot in length, and nine lashes, each composed of two layers of whip-cord about a yard and a quarter long, with nine post-boy knots towards the end, and about two inches apart; the extreme point of each lash was made firm with waxed thread. The culprit was bound arms and legs to a post, and the number of each stroke called out by the chief constable before the lash fell, and about three per minute were given, so that a hundred lashes occupied a considerable time. Dr. Barnes assures me of what every rational man would anticipate,—that no good ever resulted from these disgusting, disgraceful barbarities. The spirit of the tortured person was broken, and he was rendered reckless for ever. As it is a point of reputation with the convicts to appear to despise the torture, and numbers of them are the most daring, determined, and courageous of men, he continually witnessed the absence of all exclamation: but in *every* instance something was noticeable which disclosed suffering or determination,—the shoulders were generally kept raised, showing the strong action of the surrounding muscles,—or perhaps a bullet in the mouth was found afterwards flattened out to the thinness of a wafer by the action of the jaw.

In an account which Dr. Barnes has kindly written for me of some of these cases, he remarks: "Although those men, by a species of false pride, would endeavour to show what they termed a manly spirit, and bear unflinchingly that most dreadful torture, without calling out or making any demonstration of bodily suffering by the writhing of the trunk, limbs, or muscles of the countenance,—yet in *every* instance when punishment was inflicted, the culprit evidently prepared himself to bear up against it, by placing himself in a particular position; for instance, the *hands grasped firmly* the halberts, the *back was curved* and the *shoulders were raised*, the *chest was emptied* and the *abdomen was drawn inwards*, the *breathing was short* and the *pulse quickened.*

"Thomas Hampden was flogged in June, 1827; he received one hundred lashes, but did not evince any symptoms of pain; yet the punishment was twice suspended during its infliction by my directions, in consequence of the appearance of his countenance and the state of his pulse. Water was applied to his lips, and, although he told the constable he did not require any, yet he drank greedily. When the punishment was complete and the prisoner was released, he threw his shirt carelessly over his shoulders and went to his barracks, and in a boasting manner said his back would not require the doctor; and in order to carry out his principles he went to his labour daily, without availing himself of the privilege which the sick-list afforded of giving rest till his back was healed.

"This man, when in the hospital subsequently with fever, told me the torture produced by the lash was like boiling water poured constantly on the back; and that nothing but the fear of being derided by his fellow-convicts could prevent a man from showing his feelings." His sufferings were, however, shown by the signs of the determination necessary in *all the instances* to bear up under them.

I do not believe that any person in an ordinary state could bear so severe an operation as amputation of the thigh without making some muscular effort visible to a good observer, or evidencing pain by a look, the condition of his lips or

breathing, or by something else inconsistent with the perfect motionless and universal relaxation, the perfect placidity of countenance, the perfect regularity of breathing, in short, the perfect absence of all expression, not to say of suffering, but of *determination*,—of *firmness*, that was so remarkable in Wombell. His aspect, during the whole time, was that of a person in a sound and beautifully placid sleep, with the lips, I understand, slightly open: "the placid look of his countenance never changed for an instant; his whole frame rested uncontrolled in perfect stillness and repose; not a muscle or nerve was seen to twitch." The low moaning was, as I have already stated, not correspondent with the course of the operation,—did not occur with any relation to moments when this gave the greatest cause for pain, but seemed totally uninfluenced by the proceedings of the operator; and was not induced or increased even by the severe treatment of the end of the sciatic nerve. It gave all present the idea that the man was dreaming unpleasantly. He made *no boast* afterwards that the pain had been nothing,—a very trifle to bear: but declared he had felt *no pain at all*, for he had *not known* that the operation was performing. His first exclamation, *not made the moment he awoke*, as if he had meant to say something striking, but *after* he had looked about in surprise,—a circumstance so in accordance with what mesmerists always observe when any change in external circumstances has occurred during the state of the patient,—was, "I bless the Lord to find it's all over,"—an exclamation showing no disposition to make the bystanders believe he was a brave hand at bearing pain. Every thing, in short, proves the reality of the case to those who are not the prey of that cruel disease—prejudice.

Suppose, however, that Mr. Alcock, or any of the opponents of the evening, had observed patients during operations with sufficient minuteness to *know* that they made no muscular effort whatever and showed no expression of pain or determination, but remained all the time in silence, as calmly breathing, as motionless and universally relaxed, with as equally unchanged a placidity of countenance, as this man, all that would amount to nothing, unless, in addition to the operation, a *pointed* instrument had been roughly poked against the divided end of some large nerve and the same undisturbed state of the whole person had continued as in this man. The divided end of his sciatic nerve was not merely brushed roughly with a sponge, and pinched, but poked with the points of a forceps, and he gave no sign of suffering! *Not one* opponent on the score of firmness all the evening alluded to this, any more than to the astonishing improvement in the man's sleep, and looks, and health, after being mesmerised!

Dr. James Johnson, the reviewer, and another doctor whose name I hear was Truman, followed in the same strain with the preceding speakers. Dr. Johnson added that he would not have believed the facts mentioned in the paper had he witnessed them himself. When a man has reached this point of intellect, the sooner he shuts his eyes and retires from this wondrous scene into utter darkness the better. Dr. Truman talked rapidly and confusedly against mesmerism without any argument and with a total ignorance of the subject, that led him into ridiculous statements, which Mr. Symes corrected: he attempted to speak a second time in the course of the evening, and politely believed that the man was prepared for the occasion and designed as a great card by the mesmerists; but the meeting loudly refused to hear him.

Dr. Marshall Hall, some years ago, when my Demonstrations went on at University College Hospital, called mesmerism "trumpery" that "polluted the temple of science;"* and now, being, *like all the other opponent speakers, totally ignorant of the subject*, and glorying in his ignorance, very consistently considered the present case to be one of imposition, because the poor man's sound leg did not start or contract while the diseased leg was amputated! The case, he said, "*proved too much, or rather flatly contradicted itself*," because the sound leg did not contract when the diseased one was cut. He asserted that, "in cases

* Lectures in Webb-street, Borough—*Lancet*, Oct. 28, 1837, p. 42.

of insensibility in brutes, from intercourse of any portion with the brain being stopped by division of the spinal cord, or from absolute decapitation, or from stunning by a blow upon the head, such an injury of an insensible *leg* as pricking it with any thing, lacerating, or cutting,—such an injury for instance as plunging a sharp instrument into the muscles," (I sat next to Dr. M. Hall and those were his very words), "invariably causes both legs to contract; and, unless man differs from all other animals, the same must take place in the human being; and, as this man did not move his *other* leg,—did not *enact the reflex motions*, he was no physiologist." Had he been such a physiologist as Dr. Marshall Hall, and read about the reflex motions, "he would have known better, and would have moved the other leg,—and enacted the reflex motions." The ignorant man! Dr. Marshall's Hall's right leg would have moved most physiologically, if a surgeon had plunged a knife into his left! It was very silly of the man not to allow his sound leg to start, nor his diseased leg, nor any part of his frame. But a horse has been just as silly, just "as bad a physiologist," and has just as "flatly contradicted itself," by not "enacting the reflex motions." "A horse was struck with the pole-axe over the anterior lobes of the brain. It fell instantly, as if struck with a thunder-bolt; it was convulsed, and then remained motionless. It shortly began to breathe, and continued to breathe freely by the diaphragm. When lacerated or pricked with a sharp pointed instrument, as a *pin* or *nail*, on any part of the face or surface of the body, it was totally motionless, manifesting no evidence of sensation or volition." In another account it is said, "deep lacerations" of these parts produced no movement of any kind, nor any infliction on the skin by "a pin or other pointed instrument." Now this I quote against Dr. Marshall Hall on authority considered by Dr. Marshall Hall at least equal to any in the world,—equal to his own. But whose can this be? Can there be an authority equal to Dr. Marshall Hall's? It is Dr. Marshall Hall himself!* Dr. Marshall Hall in print, against Dr. Marshall Hall in debate! Dr. Marshall Hall in print proving too much, or rather flatly contradicting Dr. Marshall Hall in debate! But Dr. Marshall Hall in print is quite right.

The other extremity may move, but it may not. I cut off the heads of some frogs, and, in the presence of Professor Wheatstone of King's College, Mr. Atkinson, Mr. Symes, and Mr. Wood, pinched the toes of one leg with the forceps; the leg contracted, but the other leg was still. I repeated the experiment twenty times, and, in almost every instance, the same leg only contracted: once or twice the other leg contracted, but it was when general contractions of the whole mass of the frog took place. I repeatedly pinched the muscles of the thigh, and they alone contracted, the other extremity being invariably unaffected. Provoking frogs! Why did you not contract your other leg? Impostors! You little thought you "proved too much"—for Dr. Marshall Hall; and yet you were but like some other unphysiological frogs. For Dr. Marshall Hall says that, if, when he divides the spinal cord in frogs just below the occiput, so that the creatures remain motionless, he then pricks or pinches the toes, "there is no movement at first, but soon distinct movements take place, and general retractions of the lim*b*!!" not limbs.† Mr. Ward states, in the *Nottingham Journal* for December 30th of last year, in answer to a very silly letter by a young surgeon at Nottingham, that he has made the same experiment with the same result upon a rabbit. "Having knocked one rabbit down, it at first lay motionless, as if dead from the shock; it then showed all signs of life by breathing tolerably freely. With a pin I deeply pricked first one limb and then the other—and invariably the one I pricked was retracted, the other lying motionless. Such results have followed other experiments." If, as many have asserted respecting the rogue whose leg was amputated by Mr. Ward, an inquiry were to be cautiously made, there can

* *On the Diseases and Derangements of the Nervous System*, by Marshall Hall, M. D., F. R. S. p. 8, 1841. *Lectures on the Nervous System.* By the same, p. 21.

† *On the Diseases, &c.* p. 6.

be no question that we should learn the rabbit's motives for not contracting its other leg. It no doubt had its reasons. It no doubt hoped for future favours from the surrounding nobility and gentry. It was no doubt well "trained," and its case "designed as a great card by the mesmerists." It no doubt had been bribed. You little rogue, you little knew you were "proving too much"—for Dr. Marshall Hall. You were ignorantly quiet; but were also spitefully quiet. Why did you not, like the wise young surgeon of Nottingham, stir for Dr. Marshall Hall? Malicious animal! was it not enough that the *man's* case proved too much —for Dr. Marshall Hall?* And yet you were not so bad as one of Dr. Hall's

* To expose the miserable shifts to which Dr. Hall condescends to have recourse rather than own himself wrong, I must state that Mr. Ward in his quotation from Dr. Hall's book, made by myself in the last page, omitted the words, "*as a pin or a* NAIL," after the words, "*when lacerated by a sharp or pointed* INSTRUMENT." The question was not with what sharp or pointed instrument the *laceration* was made, but whether the part was pricked or *lacerated* with a sharp or pointed INSTRUMENT. Of so little importance did Dr. Hall consider it that, in relating his experiments on the frogs, he employed neither a nail nor pin, but "*pricked* and pinched the toes with the *probe* or forceps." In the society he considered the experiment fairly made, when an amputating *knife* was *plunged into the thigh* of the man operated upon." In another relation to the experiment upon the horse in another book, Dr. Hall, we have seen, is not particular about the instrument, but says "*pin or other* pointed instrument." Yet Dr. Hall published a letter in the *Nottingham Journal* for February 3, asserting that the apparent discrepancy between his written and oral statements of experiments arose entirely from Mr. Ward's omission of two words in quoting him. He most wilily does not say what the words are, so that one would suppose they were of great importance; whereas they are not of the slightest, and in the society he spoke of *any sort of wound* of the insensible leg. In the next newspaper (February 10), Mr. Ward requests him to point out what words of importance were omitted. But Dr. Hall was again wily, and in a short letter to the editor did not point out the words, but merely repeated that there was the omission—a proceeding calculated to make an impression and screen himself. He knows well that, if a laceration of the surface by a nail would not cause reflex motions, his assertion in the society must fall to the ground; and he does say, in both the works already quoted, that deep lacerations, and therefore superficial ones also, for these cannot be avoided, with a nail in the struck horse, had no effect of any sort. He knew well that, in his printed accounts, his purpose was to show that a laceration, a wound, a pinch, to produce the reflex motions, must be made on certain parts, for instance the toes, eyelids, and that a straw might suffice; and that the other parts, for instance the body and portions of the extremities nearer the body, possessed no such impressibility. Again; in no part of his printed accounts does he recite any experiments with knives; all his experiments were made with pins, nails, probes, a forceps, or straws; and thus, when it is pretended that, in saying the man's leg should have moved if man is not unlike every other animal, he meant because other animals moved when a palsied leg was cut with a knife, and that therefore Mr. Ward should have cut the rabbit's leg with a knife, I maintain that this is unfair—that Dr. Hall, referring to his own experiments, and never having used a knife, made the assertion in regard to simple wounding,—no matter with what sharp "instrument."

Equally miserable is the attempt of the young Nottingham surgeon, in a second letter, equally silly, heartless and discreditable with the first. He declares that Mr. Ward's experiment does not bear upon the question, because this gentleman "DEEPLY pricked" the muscles of a rabbit's leg, instead of making the experiment "upon the foot or upon some incident nerve *expanded* on the foot," "muscular fibres having no incident nerves, and not reflex or excito-motor, at all." Why, Dr. Marshall Hall considered in the society that, when Mr. Ward *plunged* the knife into the *muscles* of the man's *thigh*, just as Mr. Ward plunged the pin into the rabbit's thigh, the experiment was fairly made; for he said that the man's other leg ought then to have moved. Besides, though the pin went deeply into the muscles, it pierced the *surface* first; and not only was the skin, but the proper nerves of the reflex function, wounded by Mr. Ward, since *reflex motions actually resulted* from his pricking, though, unfortunately for Dr. Hall, in *only the leg pricked*;—the "*pin*" used by Dr. Hall to *lacerate* the horse, without causing movements, and on which Dr. Hall and his young disciples would lay so much stress to explain the absence of movements, was used by Mr. Ward to prick the rabbit, and *did cause movements*, but unluckily in *only* the pricked leg. The experiment was therefore perfect; no matter what was the instrument, or what the part,—reflex movements were produced, but only in one leg. I have however not only run a needle and a knife into the thighs and legs of headless frogs, and amputated them, without any effect, but pinched the *toes* with a forceps, and yet the other leg was almost always motionless.

Poor Mr. Wakley, not contented with the displays of medical science which he makes at inquests and which are the richest of my newspaper treats, goes about telling persons not medical, with the most scientific air, that the case at Wellow was proved to be an imposi-

patients. You did move your pricked leg, though that only; but a comatose patient into whose cheek, hand, and thigh, Dr. Hall ran a pin very deeply, he says, made not a single muscle move on either side.*

I should have thought it more likely for the man's cut leg to have moved than the other. If Dr. Marshall Hall, after meditating upon his "reflex" glories till he lost himself, and lay in his armchair in ecstasy, were to have his knuckles rapped, I engage to say that the hand rapped would be the one to move and be shaken in the air, and "enact the reflex motions," so that all the bystanders would see on which hand he was rapped. The poor man at Wellow made not the slightest movement of either leg! The operation was like an amputation on a powerless dead body.

For the general reader, I will give a short account of the subject of movements produced by the irritating animals whose heads have been cut off, or deprived of nervous communication with the portions irritated.

In 1663, Boyle stated that the bodies of vipers, deprived of their head, would move on being irritated.† Redi, an Italian physician, found, in 1684, that, after cutting off the head of a tortoise, the legs moved whenever they were pricked.‡ Dr. Whytt, the justly celebrated physiologist and physician of Edinburgh, discovered, in 1745, that, if the toes of the hind feet of a decapitated frog are irritated, after ten or fifteen minutes have elapsed subsequently to the decapitation, the feet are drawn up to the body; if one of the legs is pulled down from the body and kept extended, no sooner are the toes of this foot wounded, than the leg is drawn up to the body as before:§ "he also noticed that, though the muscles of the thigh were contracted when pricked or cut, neither they nor the neighbouring muscles were nearly so strongly convulsed as when the toes were wounded;" and that, if the spinal chord of the decapitated frog is first destroyed with a red-hot wire, none of these effects result. ‖ He illustrates the subject by very numerous instances of movements so excited apparently without our will or consciousness, and he generalised the facts of the subject beautifully. Sir Gilbert Blane, in 1788, cut off the heads or divided the spinal chords of kittens, and found their hind legs shrink from the touch of a hot wire applied to the hind paws; and the tail to move when irritated, even if the chord was divided below the last lumbar vertebra.¶ In 1812, a French vivisector, Dr. Le Gallois, divided the trunk of a frog into transverse pieces, and found that each, as it possessed its portion of spinal chord, moved when irritated.** Nay, Dr. Macartney found that if the eye is taken out of an animal and light suddenly admitted upon its nerve of sensation—the retina, the iris contracts.†† But, many years after Whytt, a German physician, named Prochaska, entered in 1784, largely into the subject, and urged that there were nerves to receive and convey the impression, and nerves to excite the consequent motion, and he termed this their operation "the reflexion of sensory impressions into motor."‡‡ Dr. Marshall Hall has taken up the subject with such eagerness, and written upon it so repeatedly

tion by a scientific point: and yet, in the *Lancet*, for August 18, 1830, he published an interesting case as genuine, on the authority of Dr. Imray, of fits of catalepsy and insensibility, in one of which, during cupping, the spirits of wine ran about the young lady's neck and caught fire, without any movement occurring to indicate there was sensation or *reflex function!*

**Lancet*, Feb. 10, 1833, p. 685.

†*Usefulness of Natural Philosophy*. Part ii. Essay i. 1663.

‡*Observazioni intorno agli animali viventi*, p. 210, 1684.

§ *Observations on Irritability*. Sect. iv. Part. 4.

‖ Same book, sec. ii.

¶ *Select Dissertations*, p. 262. 1822.

***Sur le Principe de la Vie.*

††*Report of the third meeting of the British Association*, 1834 p. 53.

‡‡*Commentatio de Functionibus Systematis Nervosi*, cap. iv. printed 1784. *Opera minora*, pars. ii. Vienna. 1800. He even pounds out the portion of the nervous system which he conceives to receive and then reflect the impression to the muscles; viz., the *obong* and *all the spinal* marrow, and the crura and thalami of the brain. p. 153.

after his first publication in 1833,* that, in his ludicrously uncontrollable and never flagging appetite for notoriety, he would have the world believe him to be a discoverer in the subject, has passed over (as in the case of Prochaska, till he was exposed) or been most unjust to his predecessors, has made incorrect statements, and, though he has the merit of forcing attention to the subject, he has succeeded in forcing far more to himself, comparing himself at last to Harvey, who, in his disgust with the world, would not have given his manuscript on Generation to it, but for being entreated by Ent to forgive it and not to deprive it of what would be useful—when he benevolently relented.† The following

* *Philosophical Transactions*, 1833.

† Those who are desirous will see a full exposure of Dr. Marshall Hall's false claims and injustice to other authors, in the *London Medical Gazette* for April 7, 14, 21, 28, and May 5, and *Lancet* for April 28, 1838. Mr. Mayo, who has devoted great attention to the *nerves*, thus expresses his opinion of Dr. Marshall Hall's claims on the subject: "Dr. Marshall Hall has given the good name of reflex function to this circle of impression and action, and has added one or two additional facts in illustration of the principle." *The Nervous System and its Functions*, p. 50, 1842. As to the good name, we see that Prochaska had called the operation "the *reflexion* of sensory impression into motor." p. 154-5-6-7. All these statements gratify me as confirming the opinion to which I painfully and dispassionately came when studying the subject for the part of my *Human Physiology* which I published in 1837, p. 495 and following. "Now really the whole truth appears to be what is well known, that an impression made upon *any* nerve of sensation, or, what is the same thing, upon *any* part endowed with sensibility, may induce action of *any* voluntary muscles calculated to remove it if disagreeable, or to be useful in some way to the individual, even though the brain be prevented from perceiving the impression,—from having a sensation from the impression. The impression need not be upon nerves running to the part of the encephalo-spinal organs, where the roots lie, of the motor nerves excited, for a sharp pinch of the toe will not merely make a man draw away his foot, but raise his arms, make a face and halloo into the bargain, whether he is asleep or awake. Tickling the sentient twigs of the fifth pair, the eyelid, and cornea, is not requisite to cause winking; if by the optic nerve, one not included in Dr. M. Hall's excito-motory class, we see a finger suddenly approach the eye, instinctive, involuntary winking will as certainly occur. Winking will occur if a strong light is suddenly admitted through the lids to the *retina* of a person asleep. The sun's glare upon the retina will excite sneezing. Not only are sneezing, vomiting, sobbing, mentioned as acts of this system, but even deglutition, which is declared *always* to be of this nature, and *always* to require the presence of some stimulus to the sensible nerves of the pharynx, it being 'impossible to perform the act of swallowing three or four times in rapid succession, without taking something into the mouth.' Now if deglutition is always an *excited* act,—to use this gentleman's peculiar language,—is always produced involuntarily by an impression on the pharynx, it must be as impossible once or twice, without taking something into the mouth, as three or four times, and slowly as rapidly. I however can swallow with nothing in my mouth in rapid succession, as readily as with something, and above fifty times: that is to say, till the muscles are fatigued. If swallowing is instinctive when any thing reaches the pharynx, so is the act of opening the mouth when a sugar-plum is offered to the eyes of a baby: and indeed the various movements of the extremities, head, and trunk, which naturally are performed on various circumstances presenting themselves, are just as instinctive; and we have only to observe the movements of other animals, especially of those most like ourselves, and above all of monkeys, to see how instinctive our voluntary actions are when we are most apt to regard them as determined by our reflection. We contract all voluntary muscles either simply because we think proper, as when we cough at the request of another, or because a strong motive is given, as when we withdraw the hand from any thing hot; and the latter is only such an instance as swallowing, coughing, winking, &c., when food is in the pharynx, phlegm in the larynx, or strong light in the eyes. Certain sensations excite a certain desire and this may be too strong for us to overcome. But according to the strength of mind will be the resistance to the strength of the desire induced by the sensation. Some actions result from certain sensations only, and we can neither perform some without these sensations, nor when these sensations exist find it possible not to yield to the desire. With some deglutition is not an act of this kind. But sneezing is with all. I never knew a person able to sneeze at pleasure. To be induced to will sneezing we must have a certain sensation. If our attention is drawn to something else, though the irritating cause act, we do not feel the sensation and do not sneeze. If the sensation is felt forcibly, the impulse may be too strong for us to resist, and sneezing will be involuntary: and we can bring ourselves to sneeze by attending closely to the sensation, and by increasing it. I have often amused myself by looking more or less at the sun, or thinking more or less of tickling felt at the moment in the nostrils, and so increasing and lessening the inclination to sneeze. Without the *sensation* and a certain amount of it, the sneezing no more than general convulsion

passage from Sir Gilbert Blane's *Select Dissertations*, p. 262, printed in 1822, should be seen by those unread persons who vaunt his pretensions. "There are facts which show that instinctive actions, even in animals endowed with brain and nerves, *do not depend on sensation:* I took a live kitten, a few days old, and divided the spinal marrow, by cutting it across the neck. The hind paws being then irritated by pricking them, and by touching them with a hot wire, the muscles belonging to the posterior extremities were thrown into irritation, so as to produce a shrinking from the injury; the same effects were observed in another kitten, after the head was entirely separated from the body. In repeating this experiment, I found that when the spinal marrow was cut through between the lumbar vertebræ, and os sacrum, the posterior extremities lost their irritability, but the part below it—the tail, retained it." "In an acephalous monster, the like phenomena were observable. It moved up its knees when the toes of its feet were tickled; it performed the act of suction; passed urine and fæces and swallowed food." Let any one read Dr. Hall's paper in the Philosophical Transactions, above ten years afterwards, when all this is printed as original, without a single allusion to the names of Prochaska or Blane, and consider which was the greater, Dr. Hall's boldness in sending the paper, or the council's in printing it.

But after all, Dr. Marshall Hall entirely mistakes the nature of the man's case. The man's head had not been struck nor his spinal chord divided. The stunned horse, the divided frogs, were paralysed solely because the former's brain was overpowered, and the latter's wounded and pinched extremity had lost its communication with the brain. But paralysis, insensibility, and loss of voluntary motion may arise not only from inability *in* the brain to receive impressions brought to it or to will movement, or from the communication *between* it and parts impressed or parts to be moved being interrupted, but may arise also from the *parts themselves* being incapacitated, however capable and entire the brain and its lines of communication may remain. If the *part itself* is incapacitated, not only cannot the brain obtain a sensation from it or excite a movement in it, but impressions cannot be made upon it by pricking or lacerating or cutting, so that Dr. Marshall Hall would in vain prick, lacerate, cut, or stab it,—it would not "enact the reflex motions." This is the case when the nerves in a part are palsied by cold, or opium, or disease. The brain and spinal chord may be affected at the same time; but that is not necessary, for the incapacity of the part itself prevents both sensation and voluntary motion, and likewise impression and reflex motion. Now this was the man's state: but Dr. Marshall Hall, glorying to remain ignorant of mesmerism, did not know it. Even the exposed muscular fibres of the patient quivered "less than usual;" nor was there the ordinary amount of retraction of the muscles when divided: and, as the man had no power to impose in these two points, Dr. Hall and the rest who speak of imposition must with reference to them charge Mr. Ward the narrator with fabrication. The stupefaction of mesmerism may not be in the brain or chord only, but in the individual parts; just like the stupefaction from exposure to cold which may stupify the brain, but, besides this, stupifies each part. The mesmeriser may

of the ejaculatores, takes place. At the same time the facts discovered by Whytt and others show a connection between motion and impression independent of the brain. But this is probably intended to assist the will in exciting motions on the occurrence of impressions on individual parts; and the impression may be so strong that the will may be compelled to determine the motion, and this compulsion will be according to the strength of the impression and the weakness of opposing motives and of the resolution to resist the inclination. Nay, these facts show that motion will occur when the brain is removed and there can be no sensation. Yet when the brain exists and in healthy force, that the will does co-operate with this local excitement of nerves of voluntary motion by those of sensation, when we might not be disposed to believe it, appears from the curious facts mentioned at pages 486—491, showing that sensations may occur, and the will may be exercised, almost unconsciously. While the brain exists and the system is in health, these motions do not occur without will, or without sensation should the will be overpowered."

suspend or restore not only one or more of the individual five senses, but also the sense of touch in *individual parts*,—in an arm, a leg, or a finger. More than this; he removes or restores not only feeling, but the simple senseless impressibility by which, if even the head is cut off, an irritation of an extremity causes it to move,—causes the reflex function, or "reflexion of sensory impressions into motor," to use Prochaska's two words, to be performed. He can locally suspend them all, as cold, or poison, or disease can locally suspend them all. This was the state of the man. He was in a sleep more or less sound, and more or less extensive through his brain; but his nerves of feeling and will, and his nerves also of common impression and automatic motion, or, in other words, his common reflex or excitomotory nerves and their expansions were also asleep or stupified; and therefore there could be no such movements as Dr. Marshall Hall expected, any more than if the chord or nerves had been disorganized. But because there were none, because things did not happen according to Dr. Hall's notions, nature was wrong, not Dr. Hall; the man was an impostor, not Dr. Hall's fancies unfounded. When the Strasburg doctors disputed on the stranger's nose,—

"'Nature accommodates herself to emergencies,' cried the opponents, 'else what do you say to the case of but half a man, when both his legs have been unfortunately shot off?'

'He dies of a plethora,' said they, 'or must spit blood; and in a fortnight or three weeks goes off in a consumption.'

'It happens otherwise,' replied the opponents.

'*It ought not*,' said they."*

Dr. Marshall Hall's error,—the error of ignorance, but of wilful ignorance,—was in supposing that the alleged insensibility and motionlessness of the mesmeric state resulted from merely the coma. Nay, these may take place without any coma whatever, the person remaining wide awake. In many patients who have been fully mesmerised on former occasions, you may affect an arm or a leg, causing it to become insensible, motionless, perhaps rigid, unimpressionable to pinching, pricking, and cutting; and without mesmerising the brain. Dr. Marshall Hall, while the paper was read, had just heard that local effects without mesmerising the brain could be produced in this man. "I then showed them," says Mr. Topham, "my power of affecting any one of his limbs, even *when he was quite awake*. At my request, he extended his arms alternately. By making two or three passes over each, without any contact, they became as rigid and unyielding as bars of iron, not to be unbent except by mechanical force powerful enough to injure the limbs; and yet, instantly relaxing throughout, and dropping to his side, from the effect of my breath alone. His right leg was affected in the same degree; and immediate relief from pain was frequently afforded by making similar passes over the diseased one."

I suppose that, had not the blind foes of mesmerism learnt this reflex operation from Whytt, and second-hand from others, they would have accused every poor decapitated frog of some kind of imposition upon its moving when pinched. THEIR *ignorance would have been* ITS *crime*.

Mr. Travers, who was present but said nothing, could have related an instance in which he made Dr. Marshall Hall's experiment of pricking with a sharp instrument upon a man whose hands had lost their feeling. At the request of Dr. Yelloly he pricked the sensible skin of the ball of the thumb with a lancet-shaped couching needle, down to the bone, with no result whatever: no feeling, no starting of the *other* hand, or of the same hand, took place.

But I will give the particulars of the case published by this very Medical and Chirurgical Society, in 1812,† when Sir Astley Cooper, Sir Walter Farquhar, Sir Henry Halford, Sir Everard Home, Drs. Baillie, Bateman, Birkbeck, Marcet, Pemberton, Roget, Saunders, and Yelloly, and Messrs. Abernethy and Cline, selected papers for publication. It is detailed by Dr. Yelloly, and occurred—

* Sterne.

† Vol. iii. page 90, and following.

"In a Jamaica planter, 58 years old, whose *mind* and *muscular frame* were unimpaired, but whose hands up to the wrists, and the feet half way up the leg, were *perfectly insensible* to any *species of injury*, or *cutting*, *pinching*, *scratching*, or *burning*. He accidentally put one of his feet into boiling water, but was no otherwise aware of the high temperature than by finding the whole surface a complete blister on removing it. No species of injury to a vesicated part, of either hands or feet, was felt by him. The extremities were insensible to electric sparks taken in every variety of mode. The cubital nerve, where it passes the elbow communicated the sensation produced by pressure or a blow only half way down the fore-arm." "On putting his hand, at the desire of a friend, into a pail of hot grains, which his friend assured him were not too hot, and, to convince him of this, previously thrust his hand and arm into it, there was a very extensive vesication produced. His hands were never free from blisters, which he got by inadvertently putting them too near the fire; and he had met with several severe burns without being aware of it. No degree of pressure was felt by him." To ascertain whether the flesh as well as the surface was insensible, Mr. Travers passed a lancet-shaped couching needle into the ball of the thumb, down to the bone. "Not the least degree of pain, or even of sensation was produced." (Neither did the other thumb start and contract, as Dr. Marshall Hall should think it ought, since he thinks Wombell's other leg ought to have moved.)

A case follows of a lady, about 40 years old, who had "been deprived for more than two years of the power of sensation in her hands and feet. She was insensible to the effects of cutting instruments or of burning coals applied to them. In one instance, when she was employed in shaping a piece of wood with a knife, she incautiously turned her eyes on some other object, and cut off the end of the thumb of her left hand without perceiving the smallest sense of pain." (Nor did the other thumb start and contract any more than the poor man's sound leg when Mr. Ward cut off the diseased. This gentleman and lady were as bad as, or worse, than Mr. Topham's poor man, because from their superior station they should have known better than to sham antiphysiological facts.) "Although electricity produced very considerable contractions in the muscles of her arms down to her wrists, the effects of it in her hands were scarcely perceptible. After two or three days, however, she *imagined* that she was sensible of *some kind* of sensation from *strong* shocks."

One of the Okeys, during her mesmeric state of ecstatic delirium, though possessing full power in all her muscles, was insensible to mechanical injury, burning, and electricity. The cylinders of the electro-magnetic machine were held in her hand any length of time, while the wheel was turned as rapidly as possible, without any evidence of the slightest sensation, though no one else could hold them for more than some seconds. She received the charge of a large Leyden vial, and no effect was noticed. When asked what she felt, she answered, in the former instance, "I heard it go giggle, giggle, giggle;" and in the latter, "I saw the light." At the Adelaide Gallery I put the hands of a female in a state of sleep-waking, who had not been there before, upon the electrical eel near the head and tail, and she took no notice, though I felt a very slight movement of her arms, which nobody else could remark. Now the shock of the eel made very many jump. When I was not present, I know for certain that she received at once the charge of six Leyden jars, each sixteen inches high and eight wide, without evidencing sensation. But, because the condition of Elizabeth Okey, and of this young woman was induced by mesmerism, it was feigned; as though there was more evidence of reality, or could be more evidence of reality, in the other cases than in these.

A third case is annexed, taken from the *Philosophie Zoologique* of Lamark.

"A man of 50 years of age, had for fourteen years the right arm completely insensible. The limb, nevertheless, preserved its activity, size, and power. On the accident occurring of a boil upon it, there were heat, swelling, and redness

produced in the parts, but no pain, even when it was pressed. During his work, he happened to break the bones of his fore-arm, at about a third their length from the wrist. As he only felt a crash (craquement)," (*crunching* of the impostor!) "he thought he had only broken the shovel he had in his hand; but it was sound, and he could only discover his accident by being unable to continue his work. The following day, the arm, at the fractured part, was puffed up; the temperature of the fore-arm and hand was increased, but the patient experienced no degree of pain, even during the extension necessary to reduce the fracture."

Now in these cases published by this very Medical and Chirurgical Society, when things calculated to make a strong impression were applied to one extremity, not a word is said about the other starting; and of course neither the one nor the other started, or it would have struck the patients and the bystanders, and have been mentioned and regarded as a proof that the patients felt. *No "reflex movements" were "enacted."*

The society believes these cases; but refuses belief when the loss of impressibility occurs in the mesmeric state! insensibility and unimpressibility are then impossible, and *proofs* of imposture! proofs that mesmerism is untrue; and Sir Benjamin Brodie, as I shall presently tell, comes down to the society, sneers at the poor man and the gentlemen who witnessed the facts, and then walks out of the room in perfect satisfaction with his own sagacity and authority.

Mr. Wood, who had assisted at Mr. Ward's amputation, vouched for the accuracy of the whole account of it, and urged that all the proof possible in such a case was afforded,—the absence of all sign of pain and resistance to the expression of pain, and the patient's declaration that he had felt no pain. What more proof was there in the cases just extracted from the Transactions of the Society? None. And the society admitted the reality of those cases without hesitation.

Mr. Liston, also, who, with his whole set to which he belongs, has hitherto scoffed at mesmerism as humbug and mesmerists as tom-fools, could, according to Mr. Wakely, have related an experiment which he made, like Mr. Travers, to test a case of similar insensibility,—and a case still more similar to mesmeric cases, in as far as the insensibility was not permanent but occasional, and united with catalepsy. *The Lancet* for May 22, 1830, gives a report of a clinical lecture, delivered in the University of Edinburgh, by Dr. Duncan, upon the case of a young woman who had for a short time been subject to seizures of perfect insensibility and catalepsy; "her limbs, on the application of force, yielded" no more readily, however, than lead would, "in whatever direction they were bent; and, when the force was withdrawn, remaining motionless and without tremor, like bars of lead, in whatever position they were placed, no matter how painful under ordinary circumstances, or how contrary to the ordinary laws of gravitation." The poor creature's case was perfectly real; but, because some were so ignorant of medical science as to be unacquainted with the features of such an affection, she was suspected of imposition.

The following is Mr. Wakley's report of Dr. Duncan's account of the experiment: "We cannot avoid noticing, and we do so with feelings of the most unmixed disgust, an unmanly, wanton, and barbarous experiment, practised on this unfortunate patient by an individual, unconnected, we are happy to add, with the department of clinical *medicine*" (as distinguished from clinical *surgery*). "It will scarcely be credited, but nevertheless it is strictly true, that during a paroxysm of insensibility, the person to whom we allude, *tore with his nails two separate pieces of skin from the hand of the patient.* She was not aware of the cruel and unwarrantable experiment at the time, but she felt the effects in the intervals very acutely. It is satisfactory, however, to know that but one feeling of the most unequivocal reprobation pervaded teachers and pupils at this inhuman and unprofessional act." Dr. Duncan hints only that it was a surgeon. Mr. Wakley declares the surgeon was Mr. Liston; for, in the index is this reference to the two pages in which the experiment is related:—

"Liston, Mr., inhuman experiment by, pp. 278. 281."

Yet it is impossible not to think the statement erroneous, because Mr. Wakley and Mr. Liston are now inseparable friends, and Mr. Wakley has placed his son under Mr. Liston. There, however, stands the accusation in the index to *Lancet* May 22, 1830, p. 278, vol. 18.

In this variation of Mr. Travers's experiment, the injury being committed by laceration with the nail, instead of pricking to the bone with a strong needle, there was no starting of the other hand, nor of the same hand; had such a thing happened, it would have been gladly proclaimed by the tender experimenter, if Mr. Liston was the perpetrator, (and for that we have only Mr. Wakley's assertion,) for I read the case, with Dr. Duncan's remarks, aloud, from my *Human Physiology*, p. 47, and he was sitting on an adjoining bench, but opened not his mouth. Nay, Mr. Liston himself describes a case in the *Edinburgh Medical and Surgical Journal* for April 1829, of a gentleman, a patient of his own, who lost his sense of touch over nearly the whole surface of the body, so that he could feel with nothing but his mouth, though he walked and talked, and heard, and saw, and enjoyed life; and also through the deep-seated muscles, tendons, and ligaments, so that, when Mr. Liston cut away one of the bones of his foot, he "*felt no pain whatever*," and he added, "*nor would I now, I am convinced, were you to dissect the whole foot.*" Not only did the limb operated upon not move, but the other evidently was unmoved likewise. Mr. Liston ought to have mentioned this fact in the society, and now ought to tell it to Mr. Wakley. If such things take place without mesmerism, experience can only settle whether they may take place through mesmerism. They may.

But in the insensibility of a perfect fit of epilepsy, when at its highest intensity, we have the same insusceptibility of pain,—the patient may be scratched, pricked, pinched, cut, even in the hands, something sharp be thrust under his nail, and yet no sign of feeling will appear,—the limb will not move; nor will the opposite limb, even to please Dr. Marshall Hall: and yet in perhaps five minutes, the state shall have passed,—the patient be susceptible of all impressions and perfectly himself again.

Dr. Marshall Hall continued to display his want of information. "What," he argued, "said the patient? Why that he heard the sawing of the thigh bone which is unendowed with sensibility; but he was insensible to the contusion of the sciatic nerve whose sensibility is extreme. What physiologist could believe such an absurdity?" Now I should think that an impostor would have said nothing about having heard any sound,—would have said nothing about having "once felt as if he heard a kind of crunching," which words were what he really did say, for he uttered nothing about either bone or sawing. He would have declared he had positively heard,—known, nothing. Neither would an impostor have shown he had any hearing by always waking on any attempt to converse with him; but would have always pretended to be as deaf as a post. Yet he always awoke by attempts to converse with him, whereas he did not awake when pricked or violently pinched, even in his diseased leg, which in his waking state "could not bear the lightest covering to rest upon it." An impostor would not have always shammed so very stupidly. Yet these points struck none of the objectors: or at least were not alluded to. The objectors were too dull, or too wily, or too much hurried by their passions, to reflect soberly. As a lecturing physician, Dr. Marshall Hall should have known that, in those extraordinary cases of somnambulism which nobody disputes, and which have been seen in all ages and countries, and are not very uncommon, and are independent of mesmerism, though the person be asleep, his eyes perhaps shut, his breathing heavy, and his head occasionally nodding, he will go about and do many things and do them well,—work, write, compose, may feel, may be awakened by cold air or water, and yet hear nothing, not even the firing of a pistol; and that, on the other hand, he may bear pinching and pricking without sensation, and yet hear and converse with you, perhaps hear far more acutely than when awake: in short, that, the sleep being partial,—affecting some nerves and some cerebral

organ or organs, and not others, and affecting in various degrees those it does affect, there is an endless variety of phenomena.

In common coma, of the deeper kind and fatal, the patient may feel acutely, though otherwise completely insensible. I was sent for a short time ago to a patient who was a medical man and in this very condition. Unfortunately it was the afternoon and I was out, so that I did not see him; but Dr. Barnes, who kindly supplied me with the facts of the convicts, has furnished me with the particulars. The patient was thirty-two years of age, was accidently knocked down on the head with a bar of iron in Regent Street while returning from a surgeon who had passed an instrument up the urethra, which operation was followed as he went home by a flow of blood. Ischuria ensued, and coma, which after twenty-four hours terminated his existence. "The pulse ceased to be felt at the wrist twenty hours before death; at that time and continuously till he died, a very copious perspiration bedewed the whole body—the hands and feet were icy cold. About two hours before dissolution the temperature of these parts rose considerably; the pupil was now slightly dilated and the tunica conjunctiva became infiltrated with a dark fluid, giving a peculiar carbonaceous appearance to the white part of the eyes: there was no urine in the bladder. The most remarkable feature in this case was the extraordinary sensibility of the entire surface of the body to very slight external impressions; the parts most so were the lower extremities. Now, *although the patient was perfectly unconscious of passing events, he could not be roused in the slightest degree by speaking loud or by bawling in the ears, he was unable to swallow the smallest particle of food, he had stertorous breathing;* yet, if the hand was placed over his thigh, (even on the outside of the bed-clothes,) and the part gently squeezed, *the muscles of the countenance would immediately contract and betray intense agony, and a most piteous groan would escape his lips at the same time.* This condition continued to increase until he died. The sensibility was seemingly as great a few minutes before he died as it was some hours before: so extraordinary was this morbid sensibility, that to attempt to turn the individual in bed,—to elevate his head on the pillow, or to touch the surface of the body on any part, appeared to excite the greatest possible torture. I remained with this individual twelve hours before his demise, and continued to witness this phenomenon at least fifty times."

Mr. Carstairs of Sheffield informs me that, in several instances of deep mesmeric coma induced by him, the person has heard the slightest whisper, *inaudible to the bystanders*, and some of the other senses, particularly that of smell, have also been rendered more acute than in the natural state.

Dr. Hall should have known that *mesmerism produces no phenomenon that does not occur in nervous affections without mesmerism*, as I often stated in the theatre of University College Hospital, but that it does produce all the most wonderful phenomena of all affections of every portion of the nervous system; and that the torpor or somnambulism or sleep-waking, which it produces, is that which occurs in trances, as the deepest form of singular sleep, with very moderate cerebral activity, at one extreme, and that of persons in extatic delirium at the other, in which most of the faculties are very active, many perhaps far more active than when in the natural state, and only some faculties torpid, and these perhaps but partially torpid, so that, while the patient may be very talkative, clever, and facetious, he may be divested of his usual proper reserve and even of all sense of propriety and really be in a new waking state. I shall in the next chapter detail cases of surgical operations in which *the patients, in this peculiar sleep felt nothing, and conversed all the time with the operator.* I purpose to enter more fully upon the curious subject of sleep-waking when controverting Sir Benjamin Brodie.

Dr. George Burrows expressed his doubts of the reality of the case because of the man saying he fancied he heard something in his sleep. He would not have found any difficulty had he made himself acquainted with the subject of sleep-waking, whether spontaneous or mesmeric, as he and every other teacher should have done long ago.

Another surgeon now rose,—Sir Benjamin Brodie,—whom I never saw in the society before except during his period of presidency, and who, soon after he had spoken what he came to say, seemed to consider that he had settled the matter, and left before the close of the meeting and before I could reply to him. Like all the opponents of the evening he *entirely passed over* the comfortable nights, the return of the appetite, and the improved appearance of the poor man by mesmerism. He used the argument of the other surgeons, Messrs. Coulson, Blake, and Alcock. My answer to it I need not repeat. But he did more: he supplied a defect of which I have complained,—the want of reference to a case in which, as in this, a nerve was probed; for he described a case brought up in that respect to an equality with the present, and he at the same time most singularly supplied a strong argument against himself and his coadjutors. He related an instance of operation for hernia,—an operation not to be compared for pain to the amputation of a thigh,—in which his patient evinced no sign of feeling, though I have no doubt a minute observer, not engaged in operating, would have discovered some;* the surgeon was therefore tempted to test him, and touched the divided end of a small nerve which happened to be exposed,—a nerve probably at the most but one-eighth of the size of the great sciatic nerve touched so freely in the man whose leg was amputated. Of course I expected to hear that, like the man at Wellow, this patient still gave no signs of feeling. But he did,—he instantly gave signs of acute pain! This was not the hit of a sagacious opponent. Sir Benjamin Brodie deserves and has my best thanks for making this case known, and arguing so well for the insensibility of the poor man at Wellow.

His next argument was, that some people really do not seem susceptible of pain;—cannot in fact be made, or scarcely be made, to understand what pain is. Sir Thomas Hardy, he added, was one of these. I hear it doubted whether Sir B. Brodie has sufficient ground for this assertion. But this is altogether unimportant, for the poor man at Wellow *was* susceptible of pain. He could bear his pain in no other than a sitting posture; had slept before he was mesmerised but two hours in seventy from his pain; would shed tears from his pain; could not bear except in the mesmeric state the slightest covering on his knee for his pain; and was awakened, even from mesmeric coma when this was not deepened by the fingers held on the eyes, by the slightest movement of the extremity. This argument was therefore good for nothing. But it told, as well as the preceding, for the insensibility of the man in his mesmeric state.

He further urged that patients worn down with suffering (so that he now remembered that the poor man knew what pain was) sometimes became hysterical and more or less insensible. But this patient was not hysterical; and suffered acutely to the last, even while being moved for the operation. This argument therefore falls with the rest.

He allowed after all that the man was in a peculiar state. Of what he meant I have no idea, except that the man was in an hysterical insensible state, which was not the fact. That he was in a peculiar and insensible state when under the agency of mesmerism is very true and for what we contend.

When he had seen Mr. Chenevix, fourteen years ago, mesmerise a little girl into coma, and was asked by that gentleman, "Do you think this girl really and truly slept?" he replied, "I do, and very soundly too:" and when asked, "Do you think she went to sleep of herself out of pleasure or desire, or by means of what you saw me do?" he replied, "Certainly by means of what you did." These means he compared to rocking.† Now, if he allowed this, he might, though stationary in his knowledge for fourteen years, allow that the poor man at Wellow was asleep by Mr. Topham's means. His explanation of the mesmeric sleep reminds me of the explanation given by some people of the shocks of the elec-

* It is said on very good authority that this patient was Dr. Holland, and that he declares he did feel pretty acutely, but concealed it as much as possible by not crying out. Whether or not this is true is unimportant.

† *London Medical and Physical Journal.* Sept. 1829. p. 214.

trical fish, the torpedo. The facts were at first denied, and, when they could be denied no longer, some would not allow there was any electricity in the matter, but explained them by the animal giving a sudden blow with its broad back, first drawn flat and then suddenly restored to its usual convexity. This explanation was so clear—"*hinc clarum est*," that Marrher says* that Reaumur, the explainer, "*arcanum deprehendit.*" And now we obtain electric sparks from electric fish, and the sceptics exist no longer.

He said that the case before the society was the companion of one, equally an imposture, which occurred 149 years ago, and was published by the Royal Society in the 24th vol. of their Philosophical Transactions, in 1706. He informed the meeting that a man at Tinsbury, near Bath, pretended to sleep for weeks and even months; and once on waking could not be persuaded he had slept so long, "till going into the Fields he found every body busy in getting in their Harvest, and he remembered very well when he went to sleep they were sowing of Barley and Oats, which he then saw ripe and fit to be cut down." This, told with a smirk, as an impudent trick, raised a roar of laughter in the room, and was without hesitation received by the meeting on Sir Benjamin's authority as a case of imposture; the members not appearing sufficiently learned in the *Philosophical Transactions* to know the case which, however, I related in my *Physiology*, and not as an imposture, many years ago. He proceeded to state that in this pretended sleep the man was bled, blistered, cupped and scarified, but all in vain: —the impostor still slept, bore it all unmoved, and gave no sign of pain. Nay, the man was so barefaced that, though bread and cheese and beer placed by his bedside regularly disappeared, and evacuations regularly appeared in the utensil, nobody ever saw him eat or evacuate. He was therefore decidedly an impostor; and, as he was an impostor, the patient at Wellow was an impostor, and all mesmerism is false. A rogue shams an epileptic fit in the streets, therefore all epileptic people are impostors, and there is no such disease as epilepsy. Soldiers and sailors sham rheumatic pains and palsied limbs, therefore there are no such diseases as palsy or rheumatism.

But Sir Benjamin Brodie gave an entirely false colouring to the case. The man was indeed, for periods, not seen eating, probably because he ate all his food at once, possibly when he employed the utensil, and because he might, being no doubt aware of the presence of others, like most sleep-wakers, though ignorant on awaking of every thing that had passed, have an antipathy to eat as well as to evacuate when others were present or stirring about the house; just as often occurs in insanity, for in the sleep-waking state the activity of brain that does occur is generally attended with some peculiarity of the feelings: and, indeed, if the acts of eating and employing the utensil were continuous with him, there would be a sufficient reason for his selecting periods for eating when he was undisturbed. But, nevertheless, he *was sometimes found taking his victuals and relieving himself in his sleep.* The narration runs thus:—"*Sometimes* they have found him fast asleep with the Pot in his Hand in Bed, and *sometimes* with his Mouth full of Meat." Again,—"In this manner he lay till the 19th of Nov., when his Mother hearing him make a noise ran immediately up to him, and found him Eating." Again, he did not always eat and evacuate with regularity, as Sir Benjamin Brodie represented:—"In this manner he lay for about ten weeks, and then could eat nothing at all, for his Jaws seemed to be set, and his teeth clenched so close, that with all the art they had with their Instruments they could not open his Mouth, to put anything into it to support him. At last, observing a hole made in his Teeth, by holding a Pipe in his Mouth, as most great Smokers usually have, they through a Quill, poured some Tent into his Throat now and then, *and this was all he took for six weeks and four days, and of that not above three pints or two quarts, some of which was spilt too; he made water but once and never had a stool all that time.*"

* *Prælectiones in Hermanni Boerhaavii Institutiones*, tom. iii. p. 76.

The narrator, Dr. Oliver, F.R.S., a physician of high standing, an F.R.S. in days when the fellowship was not so common as at present, did not pronounce the man an impostor as Sir Benjamin Brodie so fearlessly does. "I have no room," he says, "to suspect this to be any Cheat, because I never heard of any gain to the family by it, though so near the *Bath*, and so many people went thither out of curiosity to see the Sleeper, who, when awake, was a support to his old mother by his labour, but now a certain charge to her. Besides, *there was seldom any body in the house* to attend any profit that might be made by it, he being left alone in the house and every body at liberty to go up to his bedside." Indeed, the old mother was so far from deserving the charge of collusion with her son that, being as ignorant of his disease as Sir B. Brodie, she at first believed his sleep was only sulkiness or "sullen humour," and placed food at his bedside lest he should be starved. How, indeed, could Dr. Oliver for a moment have thought the man an impostor! For to pass over the scarifyings and various external irritations, hollowing his name in his ears repeatedly and as loudly as possible; pulling him by his shoulders; pinching his nose; and stopping his nose and mouth till Dr. Oliver feared he might choke the man; running "a large pin into his arm to the very bone, but all to no purpose, for in all this time he gave (me) not the least signal of his being sensible," Dr. Oliver held a *phial of solution of ammonia under one of the man's nostrils* A CONSIDERABLE TIME, *so strong that he himself* "*could not bear it under his own nose* A MOMENT *without making his eyes water; but he felt it not at all.* Then," continues Dr. Oliver, "I *threw it, at several times, up that same nostril*, it made his nose run and gleet, and his Eyelids shiver and tremble a very little, and *this was all the effect* I found, though I poured up into *one* nostril about *half an ounce bottle* of this fiery spirit, which was as strong almost as fire itself. Finding no success with this neither, I *crammed that nostril with powder of white hellebore*," "but he *never gave any token* that he felt what I had done, nor discovered *any manner of uneasiness* by moving or stirring any one part of his body." "Yet, the next day his nose was inflamed and swelled very much, and his lips and the inside of his right nostril *blistered* and *scabby* with my spirit and hellebore." Nay, wishing to remove him to another house, they carried him "down stairs, which were somewhat narrow, and struck his head against a stone, and gave him *a severe knock, which broke his head*, but he *never moved any more at it than a dead man would.*" This accident was an equally strong test with the applications of ammonia and hellebore, for it was violent and unexpected; and they, altogether, were tests which Sir B. Brodie never saw an impostor bear, and which *he passed over in silence.* Educated as he was for surgery, and occupied as he all his life has been with the mechanical matters of the profession, Sir Benjamin Brodie must be pardoned for not appreciating and understanding this case; but, I do not pardon him for *omitting* some of its most decisive proofs of insensibility, nor for declaring that the man was *never* seen to eat and was therefore a cheat, nor for presuming to understand a form of disease of which he knows nothing. What deception did the man attempt when his food "very regularly" disappeared, once daily or every two days, and *evacuations appeared* "*very regularly*" *in the utensil?* Did the man intend his mother to believe that the latter were supplied by any one but himself? If he had meditated something wonderful in this way, he would have prevented all signs of such matters; and that he could easily have done, as he was generally left alone in the house, while his mother worked out of doors. But, as these circumstances were not calculated to impose, so imposture was not suspected from them. The food at his bedside, in his first paroxysm of sleep, "was spent every day, and, *supposed, by him;*" in the second paroxysm, victuals stood by him as before, which he ate of now and then, "but nobody ever saw him eat or evacuate, though *he did both very regularly* as he had occasion." In fact, all suspicion of imposition is preposterous. We have a simple, artless, natural narration of a case of sleep-waking, bearing upon itself the very stamp of truth to the eyes of every *well informed* physician.

The changes which occurred at different times were highly characteristic of these more rare affections. After his first paroxysm of sleep he was dumb for a whole month. During the first fortnight of his second paroxysm of sleep he would open his eyes, but afterwards he did not;—a likely thing that a man feigning sleep would ever lie with his eyes open, or open them from time to time! At one period he ceased to eat and evacuate: his jaws closed, and neither food put at his bedside disappeared, nor did an alvine evacuation appear in his utensil for six weeks and four days, though once he made water. At another period, when he was called on by his name "he seemed to hear them and be somewhat sensible, though he could not make them any answer;"—was this likely in a man feigning absolute sleep? His eyes were not now shut so close, and he had frequent great tremblings of his eyelids:—a probable thing this, that he would have kept his eyes constantly in this irksome state of movement when sleep would have been better shammed by keeping them closed! The countryman could never have devised all these little circumstances which practitioners, who have seen as many cases of this description as I now have, recognise at once as striking peculiarities of such affections. It is worthy of notice that the man was so inveterate a smoker as to have "a hole made in his teeth, by holding his pipe in his mouth," yet, by sleeping thus, first in 1694 for a month, then in 1696 for seventeen weeks, and then in 1697 for six months with the exception of a few minutes once, he deprived himself of what must have been an indispensable pleasure.

On waking from his sleep of seventeen weeks, so far from wishing it to be believed, he could not easily be brought to believe it himself till he saw the oats and barley ripe which were sowing when he saw the fields last.

I should say that a more beautifully genuine case of sleep-waking in which coma predominated never occurred. When Sir Benjamin Brodie sat down, Mr. Symes pointed out to him and the meeting the true nature of the case—that it was an instance of sleep-waking, with double consciousness, the man being in a sleep, generally profound, but sometimes with sufficient activity of the sleeping brain to enable him to do certain things—eat, drink, and evacuate, in all these actions voluntarily administering to himself, but not remembering one of them on awaking. In some instances of this peculiar sleep, there is from time to time more activity than he showed, so that persons walk, talk, write and work, nay, they may do some things better than when awake, though the sleep continues and they be insensible to mechanical injury, and snore; and in most instances, as in the present case, nothing is afterwards remembered, and the period passed in this sleep-waking state is as a separate existence. Sometimes the coma is profound and little or no activity of brain is discernible; sometimes there is no coma but great activity of the mind, as a separate period of existence, the character or ways of the person being more or less different from those habitual, and entirely forgotten when the brain passes again into its natural state: and between these two extremes are endless gradations of activity in the various cerebral faculties. Sleep-waking is the most appropriate title, as it comprehends all actions that may be performed: though the word somnambulism is often loosely employed, which strictly applies to those cases in which the patient walks. When the coma is profound the second term *waking* is hardly appropriate; and when there is no coma the first term *sleep* is hardly appropriate, and extatic delirium should rather be the designation. But, as a generic denomination, the expression sleep-waking is very convenient and characteristic. Extatic delirium was the wild, and, to a philosophic observer, deeply interesting, state in which the Okeys were usually seen when not in a profound coma or in their natural condition.

This class of affections are most wonderful and absolutely rivet the attention of a thoughtful man; and their varieties are great and beautiful, though beautifully similar to each other. But too often medical men are lamentably ignorant of them, and, when they have an interesting case of this kind, regard it only as

a strange piece of business, and are at a loss what to do, and so torment and physic the patient without mercy, and think no more about it; or perhaps, to save meditation, declare it was all imposition. The records of medicine supply a sufficient number: and, now that by mesmerism we know how to produce them artificially, no medical man is pardonable who does not make himself well acquainted with them. Ignorance of these wonderful spontaneous cases has caused much false and cruel accusation. I have known young children treated as liars, as naughty, as odd children, and youth and grown up persons vilified as impostors, by their families and instructors, and chiefly by medical attendants, because they fell occasionally into a state of sleep-waking, of the modification termed extatic delirium, during which, though not strong enough to strike every one as delirium, their conduct differed from what was habitual and proper; or because after an unsuspected paroxysm, one in which no extravagance had been committed, they denied all knowledge of what they were told they had said or done. An instance occurred of a gentleman so seized while in a box at the theatre, and losing all knowledge of his situation and preparing to perform a private act, nothing of which he remembered when taken before a magistrate. A striking case of this kind has lately been seen by me in the Middlesex Hospital. Dr. Wilson, under whose care the patient was and who to his honour knows and boldly declares the truth of mesmerism, was from this knowledge able to recognise the case: but some uninformed and spiteful person about the Hospital wrote to the lady who kindly interests herself in the poor boy that his only complaint was temper, and a medical whisper has reached me that the case is an imposition. The boy, who, in his natural state, is very respectful and particular in his behaviour, is very regardless of both persons and places in his delirium, sings with great feeling, and recites with capital power of imitation, and eats most voraciously, and his writing is a great curiosity,—quite different from his habitual writing, and blotted all over. I unhesitatingly declare the case to be as real as the boy's existence, and should never have been tired of studying it. The case was drawn up and sent to the Royal Medical and Chirurgical Society by Dr. Wilson, in November, under the title of a case of double consciousness, and a notice affixed in the library that it would be read. But, when the members, having declared that the history of the amputation, being mesmeric, had disgraced them, learned that this case was analogous to mesmeric cases, they actually took down the notice, gave half a hint to Dr. Wilson that he might withdraw the paper, a report went about that the boy shammed, and the paper was not read till three hours before March. I am told that Mr. Bransby Cooper would not believe the occurrence of such cases, and therefore said that the boy should have had a good thrashing, which would soon have cured him. Such a state of things is really lamentable. Let Mr. Bransby Cooper study the disease of the nervous system before he condemns his fellow-creatures thus. Let him read a similar case of a girl sixteen years old, in the Edinburgh Philosophical Transactions, for 1822, and detailed in my Physiology, p. 365, who, because she recollected in her natural state nothing that occurred in the diseased, was treated in the most depraved manner; and one still more remarkable that occurred in a little girl in America, and is printed by Dr. Belden, under the title of An Account of Jane Rider, the Springfield Somnambulist, a copy of which I deposited in the Library of the Society. His flogging of the poor afflicted boy would be the counterpart of the tearing the hand of the poor girl in the Edinburgh Infirmary with the other surgeon's nails. Thrash the poor boy!! The conduct and manners of the two Okeys in their preternatural state were perfectly different from all that was observed in them when not in this state. They were totally ignorant of all persons, things, names, and circumstances, with which they had become acquainted previously: they knew neither their father nor mother, nor the meaning of the words father and mother: forgetting the meaning of almost every term, they learnt all the improper language so constantly used in the wards of hospitals, and irreverently swore and called bad names, and misapplied words, and were readily

taught to misapply them, without being aware of impropriety,—and the ignorant portion of the medical periodical press cruelly made fun of this: they had to learn every thing afresh: they would have enormous muscular power: they mimicked exquisitely, and had a strong propensity to mimickry and humour, so that they were absurdly thought by those ignorant of particular cerebral faculties being often highly augmented in such cases, whether spontaneously or mesmerically induced, by Mr. Wakley for example, to have been trained and practised impostors, whereas not a single mesmeric phenomenon ever witnessed by any person in them was unreal. The cases of both sisters were genuine throughout, similar but very differently modified, and it was ignorance only which led any one to doubt them, and it was heartless cruelty to slander two perfectly virtuous and afflicted female children, who had been carefully brought up and had lived only with their parents and afterwards in a respectable family till they were seized with epilepsy. Not merely the Editor of the *Lancet* knew no better, but the Editors of other Medical Journals; and the display of disreputable unacquaintance with this kind of case, and the composition of vulgar tirades by so many professional men pretending to medical knowledge, was precisely the conduct which we witness in the streets when a deranged or imbecile person is pursued and hooted by boys and rabble, as though he were master of his own condition and conduct, and not the subject of an affliction profoundly interesting to the philosopher and to the man who can feel for others. *Every thing* stated or ever printed to their disadvantage was *an absolute falsehood;* I repeat these words emphatically, *an absolute falsehood.* They are both cured of the violent fits for which they had been long in the hospital, and the reality of which no one had doubted, and for which I at length mesmerised them. One is already respectably married to a young man in her own station of life, and a mother; the other lives with her parents and supports herself by doing needlework for a neighbouring establishment.

Like the boy in the Middlesex Hospital, the sleep-waker at Tinsbury, from whose case I have digressed, was at first supposed, and that by his mother, to be only in a "sullen humour:" though at last she saw the truth and for some time would suffer no one to come near to him for fear of more experiments upon her son,—a likely thing if the case had been shammed for profit! But the sagacious physician saw it was no imposture. The Royal Society were equally rational, and the president, Sir Isaac Newton, October 27, 1721, put his *imprimatur* to the volume of the *Abridgement of the Philosophical Transactions*, containing the narrative *at full length*, by Sir Hans Sloane, which would not have been the case had there been any suspicion of imposition. Indeed, I never heard before of the case being suspected by any one. I have given a pretty full account of the wonders of sleep-waking in my *Human Physiology.* Beginning with natural sleep, I pass to dreams, and then to that higher activity of the sleeping brain, termed Somnambulism or Sleep-walking, or more correctly sleep-waking; from p. 598 to 660 inclusively; and I likewise devote 66 pages to Mesmerism, and print the leading features of the cases of the Okeys.

I will now extract the whole narrative of the case near Bath:—

"*A Relation of an extraordinary Sleepy Person*, at Tinsbury *near* Bath. *By* Dr. William Oliver, F.R.S., *May* the 13th, *anno* 1694.

One *Samuel Chilton*, of *Tinsbury* near *Bath*, a Labourer, about 25 years of age, of a robust habit of body, not fat, but fleshy, and a dark brown hair, happened, without any visible cause or evident sign, to fall into a very profound sleep, out of which no art used by those that were near him could rouse him, till after a month's time; then rose of himself, put on his clothes, and went about his business of Husbandry as usual; slept, could eat and drink as before, but spake not one word till about a month after. All the time he slept Victuals stood by him; his Mother fearing he would be starved in that sullen humour, as she thought it, put bread and cheese and small beer before him, which was spent every day, and supposed by him, though no one ever saw him eat or drink all that time.

From this time he remained free of any drowsiness or sleepiness till about the 9th of *April*, 1696, and then fell into his Sleeping Fit again just as he did before. After some days, they were prevailed with to try what effect medicines might have on him, and accordingly one Mr. Gibs, a very able Apothecary of Bath went to him, bled, blistered, cupped and scarified him, and used all the external irritating medicines he could think on, but all to no purpose, —nothing of all these making any manner of impression on him; and after the first fortnight he was never observed to open his eyes. Victuals stood by him as before, which he eat of now and then, but nobody ever saw him eat or evacuate, though he did both very regularly as he had occasion; and sometimes they have found him fast asleep with the pot in his hand in bed, and sometimes with his mouth full of meat. In this manner he lay for about ten weeks, and then could eat nothing at all, for his jaws seemed to be set, and his teeth clenched so close, that with all the art they had with their instruments they could not open his mouth to put any thing into it to support him. At last, observing a hole made in his teeth, by holding his pipe in his Mouth, as most great Smoakers usually have, they through a quill poured some Tent into his Throat now and then. And this was all he took for six weeks and four days, and of that not above three pints or two quarts, some of which was spilt too; he had made water but once, and never had a stool all that time.

August the 7th, which is seventeen weeks from the 9th of *April* (when he began to sleep), he awaked, put on his Clothes, and walked about the Room, not knowing he had slept above a night; nor could he be persuaded he had lain so long, till going out into the fields he found everybody busy in getting in their Harvest, and he remembered very well when he fell asleep they were sowing of Barley and Oats, which he then saw ripe and fit to be cut down.

There was one thing observable, that though his Flesh was somewhat wasted with so long lying in Bed, and fasting for above six weeks, yet a worthy Gentleman his Neighbour assured me, when he saw him, which was the first day of his coming abroad, he looked brisker than he ever saw him in his life before; and asking him whether the Bed had not made him sore, he assured him and every body, that he neither found that, nor any other inconveniency at all; and that he had not the least remembrance of any thing that passed or was done to him all that while. So he fell again to his husbandry as he used to do, and remained well from that time till *August* the 17th, *Anno* 1697, when in the morning he complained of a shivering and coldness in his Back, vomited once or twice, and that same day fell into his Sleeping fit again.

Being then at *Bath*, and hearing of it, I took horse on the 23d, to inform myself of a matter-of-fact I thought so strange. When I came to the House, I was by the Neighbours (for there was nobody at home at that time besides the sick man) brought to his Bedside, when I found him asleep, as I had been told before, with a Cup of Beer and a piece of Bread and Cheese upon a Stool by his Bed within his reach. I took him by the Hand, felt his Pulse, which was at that time very regular; I put my Hand on his Breast, and found his Heart beat very regular too, and his breathing was easie and free; and all the fault I found was, that I thought his Pulse beat a little too strong. He was in a breathing Sweat, and had an agreeable warmth all over his Body. I then put my Mouth to his Ear, and as loud as I could called him by his name several times, pulled him by the Shoulders, pinched his Nose, stopped his Mouth and Nose together, as long as I durst for fear of Choaking him, but all to no purpose, for in all this time he gave me not the least signal of being sensible. I lifted up his Eye-lids, and found his Eye-balls drawn up under his Eye-brows, and fixt without any motion at all. Being baffled with all these tryals, I was resolved to see what effects *Spirit* of *Sal Armoniac* would have, which I had brought with me, to discover the Cheat, if it had been one; so I held my vial under one Nostril a considerable time, which being drawn from Quick-lime, was a very piercing Spirit, and so strong, I could not bear it under my own Nose a moment without making my Eyes water; but he felt it not at all. Then, I threw it at several times up that

same Nostril, it made his Nose run and gleet, and his Eye-lids shiver and tremble a very little, and this was all the effect I found, though I poured up into one Nostril about a half-ounce Bottle of this fiery Spirit, which was as strong almost as Fire itself. Finding no success with this neither, I crammed that Nostril with Powder of *White Hellebore*, which I had by me, in order to make my farther tryals; and I can hardly think any Impostor could ever be insensible of what I did. I tarried some time afterwards in the Room to see what effects all together might have upon him; but he never gave any token that he felt what I had done, nor discovered any manner of uneasiness, by moving or stirring any one part of his Body that I could observe. Having made these my Experiments I left him, being pretty well satisfied he was really asleep, and no sullen counterfeit, as some people thought him.

Upon my return to *Bath*, and relating what I had observed, and what proofs this Fellow had given me of his Sleeping, a great many Gentlemen went out to see him, as I had done, to satisfy their Curiosity, in a Rarity of that Nature, who found him in the same condition I had left him in the day before, only his Nose was inflamed and swelled very much, and his Lips and the inside of his Right Nostril blistered and scabby with my *Spirit* and *Hellebore*, which I had plentifully dosed him with the day before. His Mother upon this for some time after would suffer nobody to come near him, for fear of more Experiments upon her Son. About ten days after I had been with him; Mr. *Woolmer*, an experienced Apothecary at *Bath*, called at the House, being near *Tinsbury*, went up into the Room, finding his Pulse pretty high, as I had done, takes out his Launcet, lets him Blood about fourteen ounces in the Arm, tyes his Arm up again, nobody being in the House, and leaves him as he found him; and he assured me he never made the least motion in the world when he prickt him, nor all the while his Arm was bleeding.

Several other Experiments were made by those that went to see him every day from the *Bath*, but all to no purpose, as they told me on their return; I saw him myself again the latter end of *September*, and found him just in the same posture, lying in his Bed, but removed from the House where he was before about a furlong or more; and they told me, when they removed him, by accident, carrying him down Stairs which were somewhat narrow they struck his Head against a Stone, and gave him a severe Knock, which broke his Head, but he never moved any more at it than a dead man would. I found now his Pulse was not quite so strong, nor had he any Sweats as when I saw him before. I tryed him again the second time, by stopping his Nose and Mouth, but to no purpose; and a Gentleman then with me ran a large Pin into his Arm to the very Bone, but he gave us no manner of tokens of his being sensible of any thing we did to him. In all this time they assured me nobody had seen him either eat or drink, though they endeavoured it all they could, but it always stood by him, and they observed sometimes once a day, sometimes once in two days, all was gone. 'Tis farther observable, he never fouled his Bed, but did his necessary occasions always in the Pot.

In this manner he lay till the 19th of *November*, when his mother hearing him make a noise, ran immediately up to him, and found him Eating; she ask'd him how he did? He said, Very well, thank God. She ask'd him again, Which he liked best, Bread and Butter, or Bread and Cheese? He answered, Bread and Cheese. Upon this the poor Woman overjoyed left him to acquaint his Brother with it, and they came straight up into the Chamber to discourse him, but found him as fast asleep again as ever, and all the Art they had could not wake him. From this time to the end of *January* or the beginning of *February* (for I could not learn from any body the very day) he slept not so profoundly as before, for when they called him by his name, he seemed to hear them and be somewhat sensible, though he could not make them any answer. His Eyes were not now shut so close, and he had frequently great tremblings of his Eye-lids, upon which they expected every day when he would wake, which happened not till about the

time just now mention'd, and then he wak'd perfectly well, not remembering anything that happened all this while. 'Twas observed he was very little altered in his Flesh: only complained the Cold pincht him more than usually, and so presently fell to Husbandry as at other times.

I have no reason to suspect this to be any Cheat, because I never heard of any gain to the Family by it, though so near the *Bath*, and so many People went thither out of Curiosity to see the Sleeper, who when awake was a support to his old Mother by his Labour, but now a certain charge to her. Besides, there was seldom any body in the House to attend any profit might be made by it; he being left alone in the House, and every body at liberty to go up to his Bedside."

The case at Wellow was, I allow with Sir Benjamin Brodie, a companion to this case; not however a companion in imposture, but in the condition of the nervous system. I will now present another companion, seen by myself: since the occurrence of any similar morbid phenomena—just as of the phenomena of mesmerism—at different periods, in different places, in persons of different ranks, and in persons who could never have heard of each other, is alone a very strong confirmation of the reality of those morbid phenomena—a reality, however, which ordinary sagacity, unclouded by prejudice and temper, cannot fail of discovering.

On the 9th of August, 1840, I was requested by Dr. Arnott, who, unlike men of far inferior intellect and attainment, has witnessed my mesmeric phenomena fifty times and is as satisfied as myself of the truth of mesmerism, to visit, with him, a Spanish lady of consideration, about 40 years of age, who had married at 14, miscarried every three months for two years, and then had a child, and afterwards a second. Soon after the birth of the second and up to the time I saw her —a period of above twenty years, she was subject to fits of sleep, which often lasted three weeks, during the whole of which she would swallow nothing but a little water. The fits of sleep would come on suddenly, and she was once seized at the opera. They would cease as suddenly, so that she often on waking went to the opera. In them she was insensible to light and *all noise but the voice of her infant.* Dr. Gregory the second, of Edinburgh, habitually mentioned in his lectures, when I was his pupil, the case of a cataleptic lady whom he attended, and whose disease had been induced by misfortunes very similar to the history of Isabella in the Fatal Marriage; and in her paroxysms of insensibility she appeared perfectly blind, except when her baby was brought near her, and then she gave slight signs of recognising it. Had the peculiar conditions of these ladies been induced artificially by mesmerism, the doctors would have pronounced them at once most shameless impostors, feigning insensibility, but not able to carry it on where maternal feelings were too strong for them. The same phenomenon is often witnessed in mesmerism. I have had several cases, in persons of both sexes, and of high and humble rank, of perfect deafness in the mesmeric state, except to the voice of the mesmeriser or a noise made by him.

Like the boy stigmatised by Sir Benjamin Brodie as an impostor, the Spanish lady, in her fits of sleep, would relieve her bowels, and she rose out of bed for this purpose, and even performed the usual subsequent act: though in one paroxysm the call of nature was unheeded by her, and an immense collection of hardened matters took place.

She was insensible to mechanical injury—pinching, pricking, &c., *but not to cold;* and this again is a common fact in mesmerism. I have patients at this moment who give no sign of feeling, however you pinch them, but withdraw the hand instantly that a cold body touches or even is brought near to it. The lady was, on the other hand, fond of cold, for, if ice were given her, she would sit up in bed, smell at it, and appear to like it.

When I visited her, she was in an attack. I found her eyes firmly closed and her upper extremities rigid, not yielding to an attempt to move them, and her hands placed up against her face. I blew in her face, and her eyelids corrugated the first time, but did not upon repetition. I understand that at 11 P. M. the rigidity regularly ceased and she sunk completely relaxed into a deep sleep.

How analogous, how identical, will not every one, familiar with the state artificially induced by mesmerism, recognise these phenomena to be with those of mesmeric patients!

The attacks had become less frequent of late and shorter, continuing a week only: but the present had lasted ten days, and Dr. Arnott informed me that when he called the next day she was still asleep. Headache preceded the first attack, and often continued and tormented her. The present attack was ascribed to improper food. The afflicted lady was tired of her disease, and wished for death. I recommended mesmerism as an almost certain cure, if properly and perseveringly employed; but did not visit her again as she was about to leave England immediately. It was lucky for her character that she was not a patient in the University College, or, as it was formerly called, North London, Hospital; that neither Mr. Wakley, nor the Edinburgh surgical experimenter of whom he writes, was allowed to see her; and that her case was not described to the Royal Medical and Chirurgical Society of London.

Sir Benjamin Brodie, after agreeing with Dr. Marshall Hall that according to the laws of physiology the man's sound leg ought to have moved during the operation on the other, concluded by declaring himself perfectly satisfied with the old report of the French Royal Commission in 1784, and the more recent determination of the French Academy against the truth of mesmerism. The selfish, insincere, and ambitious Bishop Watson—the writer of The Apology for the Bible, used to profess himself, in his days of wealth and importance, perfectly satisfied with Chemistry as it was when he was nobody and published his Chemical Essays:—"for his part he never troubled himself with the new-fangled discoveries and doctrines of Sir Humphry Davy."* I was once summoned to an old man near his death with the influenza, who had been forty years check-taker at Covent Garden or Drury Lane Theatre, and, though at his post every night, had been so occupied in the *money department* that he actually had never once in his life seen a play, but had been for forty years contented with sitting at the receipt of custom and never felt any desire to step three yards farther into the house and learn what a play was like. I have heard that Sir Benjamin Brodie, when I demonstrated mesmerism at University College Hospital, used to say that he disliked turning his horses' heads towards Russell Square to see a patient, lest people should think he was going to that scene of humbug, University College Hospital. From his total want of curiosity while I have demonstrated mesmerism at my own house for the last four years to any respectable person who requested me, and from this declaration at the Society, I can believe the anecdote. Sir Benjamin Brodie is to be pitied: but he is also to be condemned. He ought to know that the French investigation was most superficial and incomplete, conducted in the most random way; that the commission allowed that the effects were not imposture, and only ascribed them to imagination, imitation, and touch; that the results were varied, and the report says—"Nothing can be more astonishing than the convulsions;" "he who has not beheld them can have no idea of them; and even, in beholding them, one is equally surprised at the *profound repose* in which some of the patients are placed, and at the agitation which animates others. It is impossible not to recognise in these effects, *which are constant*, a great power which agitates the patients, which ever *masters them*, and of which the *person who magnetises them seems to be the depositary;*" —that one of the French Commissioners, truly virtuous, highly distinguished in Science, and well accustomed to investigate nature—the celebrated Jussieu, who had pursued the investigation with the greatest attention, firmly refused to sign the report of the rest, though threatened by the minister, Baron Breteuil, and made one separately, favourable to mesmerism, and setting forth the solid reasons of his convictions, after having made separate experiments; that, in 1825, on a suggestion that the Royal French Academy of Medicine should in-

* *Tait's Magazine.*

vestigate the subject anew, a powerful report in favour of the investigation was made by the Commissioners, Drs. Adelon, Pariset, Marc, Burdin, senior, and Husson; that nearly one-half of its members confessed that they had seen, and that they believed, mesmeric phenomena most marvellous and important: that, after the investigation, a powerful, and in every respect admirable, report in favour of the truth of mesmerism was made in 1831, by the Commissioners, Drs. Bourdois De La Motte, Fouquier, Guéneau de Mussy, Guersent, Itard, J. J. Le Roux, Marc, Thillaye, and Husson, and received by the Academy with the liveliest interest; that some of the adversaries of mesmerism in vain attempted to disturb the religious silence of the assembly by murmurs of disapprobation, but that the immense majority instantly repressed their attempt, and testified by loud applause to the honourable reporter, M. Husson, how highly they appreciated his zeal, talents, and courage;* that great discoveries, great progress, have been made in the subject since the old report—that the science has been enriched since that time as much as Chemistry since the days of the Alchymists; that many men, his equals in education, information, ability, strength of mind, disinterestedness, and industry, have not contented themselves with an antiquated report, and a modern superficial and unfair report of careless and prejudiced men, but boldly *asked nature to report* whether mesmerism is true, and have received from her one plain, uniform, and often repeated answer—Yes.

Sir Astley Cooper, who, though really distinguished in mechanical surgery, was otherwise but scantily informed, and was endowed with a moderate degree of the higher intellectual faculties, always refused to witness mesmerism, "because he had a character to lose." A low estimate must he have formed of his own character if it could have been lost thus! How sad an absence of moral courage and dignity! And so poor Sir Astley died as Sir Benjamin Brodie at present intends to die, without a sight of the mesmeric phenomena!—just as many astronomers in Newton's time died in perfect ignorance of Newton's discoveries, and at his death, forty years after the publication of his *Principia*, he had not, as Voltaire remarks, twenty followers out of England: and just as the Professor of Philosophy at Padua refused to walk into Galileo's house and look through his telescope to see whether the satellites of Jupiter really existed, and the Professor at Pisa made speeches to show that the facts could not be facts. In Kepler's correspondence (Kepleri Epistolæ) is a letter from Galileo, in which he writes:—"Oh my dear Kepler, how I wish that we could have one *hearty laugh* together. Here, at Padua, is the principal professor of philosophy, whom I have repeatedly and urgently requested to look at the moon and planets through my glass, which he pertinaciously refuses to do—why are you not here? *What shouts of laughter we should have at this glorious folly!* and to hear the *philosopher* of Pisa labouring before the Grand Duke *with logical arguments*, as if with magical incantations to draw the new planets out of the sky."

When the assertion that the blood circulated first attracted public attention, not only were those who believed the fact vilified as visionary, credulous, and ignorant, by the medical profession, and therefore by the mass of the public who thought the doctors must be proper judges of the matter, giving them credit for more knowledge, sense, and honesty than they possessed; and lampooned both here and on the Continent, and nicknamed *circulators;* Harvey himself losing his practice, while his loquacious and shallow opponents, now forgotten, flourished; no doctor beyond the age of forty, at the time, ever believing the circulation to the day of his death: but books were written to prove by reasoning that the facts of the circulation could not be facts. Among the rest was one entitled:—Ergo *motus sanguinis* NON CIRCULARIS. Candidate, Simon Boullot:—a thesis read in the University of Paris before the President, Hugo Chasles, 1482. Another, Ergo sanguinis motus circularis IMPOSSIBILIS, 1472. Candidate, Francis Bazin;

* *Rapports et Discussions de l'Académie Royale de Médecin, sur le Magnétisme Animal.* Par M. P. Foissac, M. D., Paris, 1833, p. 208—an historical work which all interested in the subject should possess.

President, Philip Hardouin de St. Jaques.* But if Galileo and Harvey, the philosophers of facts, were pronounced visionary and credulous, so was Bacon, who urged men to avoid fancying and to busy themselves with observation, experiment, and induction. When Elizabeth thought of making him her attorney-general, Cecil represented him to her "as a man of *mere speculation*, as one wholly given up to philosophical enquiries, *new indeed and amusing*, but *fanciful and absurd* and therefore more likely to distract her affairs than to serve her with proper judgement," in short, as an inferior practitioner, though at length Lord Chancellor.†

Sir Benjamin Brodie need not fear his company if he cease to scorn mesmerism, for he will find himself with Cuvier and La Place.

Cuvier thus writes:‡—"The effects produced upon persons who, *before* the operation (of mesmerising) was begun, were in a state of *insensibility*; those which have taken place upon other persons, after the operation itself had reduced them to that state; and, also, the effects produced upon brutes; *no longer permit it to be doubted* that the proximity of two animated bodies, in a certain position, and with the help of certain motions, do produce a *real effect*, wholly *independent of the imagination of either*. It is also evident that these effects are owing to a communication which takes place between the nervous systems of the two parties."

La Place thus writes:§—"The extraordinary phenomena which result from the extreme sensibility of the nervous system in some persons have given birth to a variety of opinions, on the existence of a new agent, denominated animal magnetism. It is natural to suppose that the influence of those causes is very weak, and that it can easily be disturbed by accidental circumstances, but it would be unfair to conclude that it never exists, merely because, in many cases, it does not manifest itself. We are so far from being acquainted with all the agencies of nature, and with their different modes of action, that it would be unphilosophical to deny their existence, because in the present state of our knowledge they are unexplainable to us."

M. Chenevix states that he had more than one conversation with La Place upon the subject, about 1816 and 1817, and that the expression of that great philosopher constantly was: "that the testimony in favour of the truth of mesmerism, coming with such uniformity from enlightened men of many nations, who had no interest to deceive and possessed no possible means of collusion, was such that, applying to it his own principles and formulas respecting human evidence, *he could not withhold his assent to what was so strongly supported.*"‖

Sir Benjamin Brodie joins the ranks of Mr. Wakley, and *id genus omne* of intellect, and information, and character, rather than of La Place!

Although it would disgrace Sir Benjamin Brodie to listen to mesmerists for a moment or to withhold his sneers, "it would not," I quote Mr. Chenevix, "disgrace the greatest man whom England ever has produced to attempt an experiment or two upon a doctrine which Hufeland, Jussieu, Cuvier, Ampére, and La Place believed. Nay, *would it not disgrace him more to condemn, without knowing any thing about it, what they knew and credited? Is supercilious ignorance the weapon with which Bacon would have repelled a new branch of knowledge, however extraordinary it might have appeared to him.*" "Surely what *great men* believe, *ordinary men* may try."

Mr. Bransby Cooper, now began, by asking the advocates of mesmerism to give him "the *rationale* of the facts." The point first to be ascertained was

* In 1723, a thesis was printed against inoculation:—Ergo variolas inoculare nefas; and in 1691, a thesis declaring the enormous wigs of that day to be healthier than our own hair: Ergo coma adscititia nativâ salubrior. 1691, Candidate, H. Petr. Mallot; President, Pet. Paul Guyard. Authors, and presidents, and doctrines, have all vanished into thin air.

† See the Life, prefixed to his works.

‡ *Anatomie Comparée.* Tom. ii. p. 117.

§ *Traité Analatique du Calcul des Probabilities.* p. 158.

‖ *London Medical and Physical Journal.* June 1829, p. 500.

evidently whether the statements of mesmerism were facts: and the author had opened his paper with these words. "I shall abstain entirely from any preliminary remarks upon the supposed cause of the effects I have produced; I shall still call the state 'mesmerism,' because the name involves no principle; it regards the phenomena only; and not the specific cause of them." "The generality of men, when they hear of some novel phenomenon, instead of testing the truth by experiment alone, endeavour to ascertain *the cause* by their own powers of reasoning; and belief or disbelief is made to follow the result. The startling phenomena of mesmerism have but too frequently illustrated this remark. *To facts* I shall therefore confine myself; and to such only as I can personally vouch for!"

He then found a difficulty in admitting the facts, because the man seemed to hear the sawing of the bone; and contended that if the man could not feel he could not hear,—that "hearing and feeling were the same." Therefore no deaf man can feel a pinch; nor men with palsied legs hear!

I presume he meant that in coma all the senses must be equally dull. His companion, Mr. Liston, who saw the case of coma with exquisite sensibility of the surface which I have described, could enlighten him on this point, were it not too philosophical a point for Mr. Liston's notice. If Mr. Cooper were not a surgeon only, but well acquainted with the more remarkable nervous diseases and with the phenomena of mesmerism, he would know that a person may be asleep and snore, and yet hear and talk; and that touch, taste, smell, sight, hearing, may each be suspended or active, while the others are, one, or more, or all, active or suspended. However, this ignorance was very excusable in him, after the speeches which others had made.

He sat down calling upon the gentlemen present acquainted with mesmerism not to let their opponents have it all their own way, and to come forward with their *facts* in a manly manner. Now nothing could be a greater treat than to see their opponents have their way, and rush headlong violently down the steep, like another set of obstinate beings in olden time who had more legs to stand upon. As to coming forward with facts, there were strong facts, and facts only, given; and given in as manly a manner as any thing could be given to the Society; and more facts than the Society knew what to do with: and yet he asked the supporters of mesmerism to come forward with more facts than were related in the paper; and he had *begun* by asking for the rationale of the facts, as if he admitted the facts and there were not facts enough.

This gentlemau is a teacher at Guy's Hospital.

Mr. Liston now rose, and, leaning forward, wished to "know if the interesting patient had sufficiently advanced in his education since the operation to be able to read with the back of his neck or with his belly." He said no more, and, if he had a friend in the room, that friend must have wished he had not said so much. His little speech fell flat and did not excite even a smile, except one of pity from myself.

However, Mr. Symes assured him, as I could have done on my own part, that he had witnessed vision when the eyes were indisputably bandaged, so that the patients in their ordinary state could not have discerned the faintest glimmer of light.

Mr. Liston made no allusion to the case of the poor cataleptic girl in the Edinburgh Infirmary, from whose hand, according to Mr. Wakley, he tore a piece with his nails; nor of the gentleman from whose insensible foot he cut away a bone, and whose whole foot he might have dissected without causing the least sensation.

Mr. Arnott found some difficulties in the case; but observed that the statement was highly interesting, and the subject deserving of attention, for he had seen operations performed without the knowledge of the patient when insensible through opium or great loss of blood. There is therefore some reason to hope that Mr. Arnott will feel it his duty to ascertain by experience whether patients can be rendered comatose through mesmerism and unconscious of surgical operations.

Dr. Mayo considered that the subject was of great importance, and should not be treated with ridicule, or at once rejected because it was startling. He declared Sir Benjamin Brodie's suggestion that the man was hysterical to be totally unsupported; and stated that he suddenly ran a pin deeply into the elder Okey when her back was turned, and that she manifested not the slightest sensibility.

Many who had witnessed the wonderful phenomena in the Okeys, and not ventured to believe there was not some undiscoverable collusion, became firm converts to the truth by making a pass behind the back of one of the sisters after the demonstration was over, on meeting with her accidentally in the passages or on the stairs when her back was turned and it was absolutely impossible for her to see or suspect any thing.

Dr. Mayo pointed out the difficulty of supposing that all the persons of different countries and ages who exhibited mesmeric phenomena were impostors.

Capt. Valiant related the case of his own nurse who had a very severe operation successfully performed upon her in the mesmeric state without any sensation. Dr. James Johnson sneered at the poor woman's truth, and wished to know if she did not beg her mistress to be present at the time. To this Captain Valiant immediately replied in the affirmative. Dr. Johnson then sneeringly wished to know what that was for. To which the Captain replied that it was surely natural for her to desire a female to be present, and that no one could be more proper than her own mistress under whose protection she was living. Dr. Johnson, as a father, should have been contented with viewing the poor man whose leg was amputated as an impostor, without attempting to insinuate that this poor female also had acted disreputably.

The authors of the paper, Mr. Topham and Mr. Ward, heard all the speeches without a single observation; and it was my intention, before I left home, to follow the same course of absolute silence, and amuse myself by seeing to what length the meeting would go. Indeed I should not have attended the meeting at all, but that several friends wished to be admitted as visiters. However, I did rise, after being repeatedly called for, and pointed out the striking facts of the narration which had been entirely unnoticed by any of the speakers: I read from the Lancet the case of the Edinburgh surgeon, tearing the hand of the poor girl in the infirmary with his nails, *Mr. Liston sitting on the bench next to me and saying nothing: and* I advised them not to reason or rely upon others, but to act as I had done,—to go to nature and ascertain for themselves from her whether mesmerism was true.

As soon as I sat down thanks were voted, without a dissentient voice, for the paper, and the society adjourned, disbelieving and ignorant of the most common and elementary effects of mesmerism, and having afforded a fine illustration of the remark of Mr. Chenevix, made fourteen years ago,—"The ignorance of the medical world in this country is as great as the precipitancy with which the case is prejudged."

As soon as the society had adjourned, Mr. Topham went up to the president, and in my hearing formally withdrew the paper from the society, saying that he wished to withdraw it on the spot; and he took his leave with the words,—"it must accordingly be considered as withdrawn."

The authors advertised it as a pamphlet on the following day, and published it on the next.

SECTION III.

RESOLUTION OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY NOT TO LEAVE A TRACE IN THEIR RECORDS THAT THIS FACT HAD BEEN PRESENTED TO THEM.

"Galileo, Newton, Salomon de Caus, Volta, Fulton, Winser, Arkwright, Gall, and all who have presented themselves with a truth in their hand at the door of this great bedlam, called the world, have been received with stones or hisses."—*Jolard.*

On the evening of the next meeting of the Society, December 13th, before the

chair was taken, Dr. Copland, the eminent compiler, goodnaturedly told me that he was going to oppose the confirmation of the minutes of the proceedings of the last meeting. I as goodnaturedly replied that I was very glad of it; and hoped he would not stop there, but propose a strong vote of censure upon the authors, the council, and all concerned in its presentation to the last meeting. He immediately looked grave and astonished. But I laughed on, and assured him I was in earnest,—and desired nothing more for the sake of mesmerism than that the society would distinguish itself to the very utmost in its dire hostility. He evidently considered the society an important body. But I hold no society or college higher than a common club, except so far as it acts rationally and with the simple love of truth and of the happiness of man and other animals.

An M.D. standing by, named Evans, living at the western extremity of Hill Street, on the left, with two very large brass plates, immediately that Dr. Copland had announced his intention to me, volunteered to second the motion: but Dr. Copland looked as if he was not ambitious of such distinguished support, and scarcely noticed him. He now said that he believed the patient an imposter, for that he had taken or seen taken off a leg from a man who gave no sign of pain; and he had published the case. I asked, "and was a nerve handled roughly with an instrument as in the case of the man at Wellow." He turned perfectly white, and said "Yes, it was." "Of course," I remarked, "you published this striking fact in your narration of the case?" "No, I did not," he replied.

When the chair was taken, a secretary read as minutes of the preceding meeting merely that such a paper had been read; no abstract being given according to the established custom of the society. The authorities thus disdained to possess the particulars on their books. The president then put the usual motion for the confirmation of the minutes, when Dr. Gregory, known in connection with small pox and cow pox, rose to express his disapprobation of the authors having published the paper immediately that it was read.

Dr. Copland rose to oppose the motion on two grounds,—the character of the paper, and the publication of it by the authors without the permission of the society. He would allow no trace to remain that such a paper had been read. The president stopped his arguments on the first point, as the paper had been discussed at a previous meeting and thanks been voted for it. The deadly hostility of Dr. Copland to mesmerism is well known. But to-night he was particularly unwise. He protested that the paper ought not to have been read, because *the author was not a medical man!*—As though knowledge was ever to be despised from any source. Why one of the authors was a surgeon, though neither was a fellow of the society. I have heard papers read at the meetings of the College of Physicians (of which he rejoices to be a fellow) by persons not medical, once by the very reverend Dean of Westminster; and the society has of course no law as to who may be authors of papers: and several members of the society are not medical men. On this point he was set right by more than one member. He then contended that, if the account of the man experiencing no agony during the operation were true, *the fact was unworthy of their consideration, because pain is a wise provision of nature, and patients ought to suffer pain while their surgeon is operating; they are all the better for it, and recover better!* Will the world believe that such folly was gravely uttered! This will be remembered as a doctor's speech in 1842, when the doctor himself shall be forgotten. In due consistency, Dr. Copland, when he is about to have a tooth extracted, of course goes to a clumsy dentist and begs the man to give him all the pain he can. In due consistency, he of course gives his patients that physic which he thinks most likely to pinch them well, because they must be all the better for being twisted with sharp pain while *it* is *operating*; the agony must do them good, and make them anxious to take *his* physic again. He then confined his motion to the erasure of the minutes, on the ground of the publication of the paper by the authors when they had no right.

Dr. Evans fulfilled his promise of seconding Dr. Copland, but made no speech.

There was now a mighty, virtuous indignation expressed by several at the publication of the paper by the authors.

Dr. James Johnson said it had been printed before it was read in the society.

Dr. Merriman, known as an accoucheur and examiner at Apothecaries' Hall, said it had been published before it was read in the society; which statement was incorrect, unless Dr. Merriman confounded printing with publishing. "Common sense should have told the authors not to publish it,—the publication was a gross insult to the society."

Dr. Gregory was so shocked that he proposed the affair should be promulgated by advertisement in three newspapers.

Dr. Copland declared the authors had broken faith with the society in publishing it, and had made a semblance of its being published under the society's sanction.

Dr. Moore protested that the authors had violated the laws of the society; and, at the same time that he was so indignant at its publication having been taken out of the hands of the society, declared, most consistently, that it was unworthy of a place in their minutes. "How would the character," he exclaimed, "of that medical society be affected, on whose records it should appear that it had received and discussed a subject like mesmerism, when no proof existed as to its truth?"

Dr. Copland rose again, and asked if the society would pocket such an affront as the publication?

Mr. Symes begged the president to inform the meeting, whether the authors had not formally withdrawn the paper as soon as it was read. The president made no reply: and at this I must express my regret. His conduct had in the whole affair been most sensible and impartial. He is in truth in all respects a gentleman; but he seemed distressed and confused at the hubbub of the meeting, and did not reply, though he evidently ought, and in the affirmative.

Mr. Wood, who was present as a visiter, hearing such remarks made upon Mr. Topham behind his back, rose and was requesting permission, as the friend of the absent gentleman so accused, to say that Mr. Topham was not aware that he had been violating any rules of the society in publishing the paper after he had withdrawn it, when he was suddenly interrupted by one of a number who humbly live, and move, and have their being in Sir Benjamin Brodie,—

Mr. Cæsar Hawkins, who objected to his speaking, because he was not a member of the society: and Mr. Wood was not allowed to say another word. Here was a body of men censuring an absent gentleman in strong language, and, when his friend rose craving permission to explain for him, that friend was instantly compelled to hold his peace. This was conduct unworthy of a society of men of the very humblest class. No law of the society forbad Mr. Wood to speak; and, had there been such a law, the laws of justice, and of that charity without which Mr. Hawkins is as "sounding brass," would have been superior to it under these circumstances. Ungenerous man! I envy you not your heart. You little thought what you caused to pass in Mr. Wood's recollection when you acted thus. You caused him to remember that but five days before (December 8th) he saw you standing near a table, while the leg of a poor young woman was cut off in the midst of agonizing shrieks, she being evidently in the last stage of consumption, and with which, as well as her scrofulous knee, she had been under the same surgical care for four months. On this very day she had died (December the 13th); and, on being opened, it was seen that at the time of the operation she had been very far advanced in consumption. Not only was the upper part of the right lung extensively disorganised, but the whole left lung was studded with tubercles, which in the upper part had suppurated and formed several large abscesses; one abscess was very large, and had burst into the cavity of the chest. It is a surgical rule not to operate for even a fistula, unless the lungs are examined and found healthy. Here the operation could only agonise the poor creature and shorten the wretched remnant of her days; and the reflection that she might probably have been spared the useless agony of the operation by mes-

merism,—a blessing in the eyes of every one but Dr. Copland,—drew a sigh from Mr. Wood as Mr. Hawkins vented forth his hostility. Had indeed the stethoscope been employed the state of things would have been known, and she spared the operation altogether,—the stethoscope, without being conversant with which no man can treat diseases of the chest without daily blunders, but which has been despised in the building where the unfortunate woman died, is spoken of now by one there as a folly reminding him of a fishing line with a fool at one end and a fish at the other, and was spoken of formerly with equal contempt by one who now uses it hourly, but who, when I first defended its importance years ago, persecuted me with his tongue, and said it was just the thing for Elliotson to rave about and he had never met with a single sensible man who advocated it.—So Mr. Wood sat down, amidst loud cries of "*Chair!*" "*Chair!*" even from an old practitioner, not a member of the society, who lives near University College, and is as violently, as he is ignorantly, antimesmeric: and, though I have been above thirty years a member of the society,—had been its president when it obtained its charter, which has no other living name in it than my own,—had procured for it myself the epithet *Royal*, and for its members the title of *Fellows*,—had allowed the society to hold its general evening meetings and the afternoon meetings of the council at my house when it had no house of its own, and given the members numerous conversazioni during the two years of my presidency, and afforded not merely my house but the proper trifling hospitality on all these three kinds of occasions,—and had furnished many papers to the Society's Transactions;—I thought that I could not consent to continue a member of it. The substitution of perverse prejudice for scientific and candid spirit was discreditable enough, but the want of common justice and feeling was too disgusting: and, after much calm reflection upon my opinion, I sent my resignation.

Mr. Perry, a secretary, condemned the publication of the paper, and so did—Dr. Mayo, and Dr. Webster of Brook Street, and I think Dr. Addison of Spring Gardens, and Mr. Davies of Highgate.

This virtuous indignation at its publication was truly laughable. The speakers all knew that the society would not have published this paper, and they would have risen in arms at the bare suspicion that the council contemplated such a thing; and yet as much clamour was made as if the society had been deprived of a treasure. I resolved to take no share in the discussion, as I knew that neither the authors nor the public would care whether the minutes were confirmed or not. I never enjoyed a farce of Foote's more than the acting of this evening; for, by a little effort, as I sat silently observing the speakers, I represented to myself that they were enacting all their parts for my amusement.

I am clearly of opinion that the society had no right to complain. This society by its laws (ch. xii. 5), cannot publish a paper without the consent of the author. Had the paper not been formally withdrawn, the publication would have been unjustifiable.

As to the printing of the paper in readiness for the withdrawal, surely if the authors had a right to withdraw it and publish it immediately, they had a right to be ready with the printing.

Indeed had they not done all this, they would have shown no spirit. For they had learnt, on the best authority, from various quarters, that a fierce attack would be made upon them in the society; that this member by name would demolish them and mesmerism and all concerned in mesmerism, and that member by name would teach people to send papers on mesmerism to the society; that "a rod was in pickle for them, and for the impostor of a patient," &c. &c. Their resolution therefore was wise to hold their peace at the meeting, and to withdraw the paper and publish it themselves, instead of allowing it to be locked up for ever in a dark closet with the other valuables of the society.

A little debate arose about the effect of confirmation of minutes. Dr. Roots, of Russel Square, thought that, if they were not confirmed, the vote of thanks

passed at the last meeting would drop; as though the business of a meeting was not valid till minutes of it were confirmed at another.

Mr. Quain, of University College, and Mr. Drew, jun., of Gower Street, urged that the non-confirmation of the minutes could not affect the proceedings of the previous meeting; that they were merely records, and their confirmation a mere assertion that they were correct.

This I apprehend is perfectly true; and the society had a full right, as the president said, to preserve no record of the previous meeting. What is done at one meeting, if it is not a prospective resolution, is complete. When a person is elected a member or officer of a body, he is fully elected; the minutes record merely the fact. But minutes may affect a prospective measure. If a meeting resolves that a certain thing shall be done at another meeting or any time subsequent to it, and the second meeting does not confirm the minutes, they are erased; and, as then no such resolution can be shown, the measure previously resolved upon cannot be taken, unless by another resolution. For want of noticing this distinction of the two cases, the confusion about the confirmation of minutes affecting or not affecting measures, I presume, arises. The idea of the non-confirmation of the minutes affecting the vote of thanks, when the persons thanked had received the thanks, and gratefully gone off with them, never probably to come near the society again, was very amusing.

So the virtuous indignation of a large majority condemned the minutes to non-confirmation,—a most ridiculous proceeding, since, from reporters being admitted, the whole proceedings of the previous meeting were already published in the various journals, and recorded more publicly than they would have been in the minute-book of the society, which nobody sees but the secretary when he writes in it and the president when he signs his name.

I forgot to mention that Mr. Bransby Cooper joined with the rest, and was not contented with virtuously disapproving of the publication, but informed us that the society ought to be grateful to us for coming forward to be so defeated, and that no men had ever had a more complete beating than had been given us. It was hardly noble in a victor not to be satisfied with seeing his foes at his feet, but thus to jeer and tell them, as they lay prostrate, they were beaten. And yet again it was very good of him, because we should otherwise not have known that we were beaten.

CHAPTER II.

NUMEROUS OTHER CASES.

"Mesmerism is too *gross a humbug* to admit to any farther serious notice. We regard *its abettors as quacks and impostors*. They ought to be *hooted out of professional society*.—Any practitioner who sends a patient afflicted with any disease to consult a mesmeric quack, ought to be without patients for the rest of his days."

Mr. Thomas Wakley, Lancet, *Oct.* 29, 1842.

I. It is a great happiness to me that, before Mr. Ward undertook to operate as he did in the case which has been described, I was originally consulted upon the possibility and safety of operating in the mesmeric state without pain and gave a decided opinion that to induce such a state and perform the most painful operation in it, both without pain and with a successful result, was very practicable. I had myself witnessed five years previously the introduction of a seton into the back of the neck of Elizabeth Okey without sensation in the mesmeric state. "For a length of time she had perfect loss of the sense of touch,—anæsthesia, in her ecstatic delirium. She could hold nothing unless she saw it; nor, till she acquired the habit, could she walk without looking at her feet. She used to take

red-hot coals out of the fire and wonder, as she held them, why other people cried out and desired her to put them down; and why her hands became blistered." As she suffered excruciating neuralgic pain in her head, I prescribed a seton. She was not apprised at all of it; and was standing before me and several others chattering wittily and deliriously, when Mr. Wood, who was behind her, suddenly took up the flesh of the back of her neck, run a large seton needle with a skein of silk into it, and put on the plaster, *without a moment's check to her chattering and fun, or any sign of her noticing it*, though I watched her most minutely. On dissipating the state, and bringing her to her natural condition, she soon found there was something wrong at the part, and put her hand to it, saying some one must have pinched the back of her neck. In her deep coma, and in that of her sister, there was always insensibility of touch, and cupping and the severest blistering were perfectly unnoticed.

2. Soon afterwards I met with a beautiful case of mesmeric susceptibility and the permanent cure of severe and obstinate epilepsy by mesmerism, in a little boy, Master Salmon, of Red Lion Street, Holborn, whose case I shall send to the *Zoist*. I threw him into sleep-waking daily for the cure of his fits. In this state, though he saw, and heard, and whispered, he had no feeling. He had an eruption in the head, which was dressed every day, but with great pain. His mother dreaded this daily business; and I advised her to mesmerise him always before she began. She did; and the removal of the old dressings, the washing, and the fresh dressing, were regularly from that time done by her in his mesmeric state, and *he never suffered in the least*, and she then always awoke him by a few transverse passes. His head got well.

3. I have at this moment a beautiful case of mesmeric susceptibility and the cure of severe hereditary and long-standing epilepsy by mesmerism, in the person of a young female whose phrenological phenomena are mentioned in my letter to Dr. Engledue appended to his celebrated address. In her sleep she converses, after having been in a profound coma, with her jaws locked, for more or less time: but has *insensibility of touch except in the skin of the face, though exquisitely sensible, throughout her frame, to temperature, whether hot or cold*,—a fact I have noticed in several other instances of sleep-waking. She had suffered severely from a decayed great molar tooth. I took her to Mr. Nicholles in Bruton Street, and threw her in a few minutes into the mesmeric state. I then relaxed her firmly locked jaw by laying my fingers upon it, and the tooth was extracted *without her knowledge*, though it had three fangs and was firmly fixed. Yet, what is as remarkable as the exquisite sensibility to heat or cold in parts that are not sensible to any mechanical injury, although the extraction of the tooth gave no sensation, *the presence of the blood in her mouth was felt unpleasantly*. She continued for some time longer in the deep and silent stage of her coma, in which she has no muscular power to raise her hand, or her head, or to spit. She soon began working her lips uneasily; and her jaw had, as usual, soon closed again. I relaxed it again, and she worked both it and her lips with increasing uneasiness. She at length awoke, immediately spit out a dessert-spoonful of blood which had lain in the front of her mouth and annoyed her; and was delighted to find her troublesome tooth had been extracted without her knowledge. She is one of a large family at Islington, admirably brought up, and with a most beautiful cerebral conformation, of the finest moral feelings and strength of mind, and as incapable of deception or affectation as those, who in their unfeeling ignorance, accuse the most innocent mesmeric patients of deception, are destitute of common sense and common charity. I shall send her case to the *Zoist* next year.

4. "March 10, 1841, at the house of M. Talbot-Descourty, in presence of M. M. Raisin, M. D., Dean of the Faculty,—Perrin, M. D.—Feuguerolles, Advocate,—Bertrand, member of the Academy,—Courty, Journalist,—Augot, sen. and Augot jun., merchants, M. La Fontaine threw G. Louis Eugene Chanal into mesmeric coma with complete insensibility. Dr. Perrin, after having satisfied

himself of this by pricking him repeatedly, stated that the pulse was 100. M. Talbot, surgeon-dentist, then proceeded to extract the last lower left molar tooth. As it was broken, M. Talbot was obliged to cut away the gum from it, and the patient gave *no sign of sensation.* M. Talbot then introduced the instrument into the mouth—*the instrument with which he had first attempted to extract the tooth;* pushed back the head of the young man, who made a sort of grunt which was unusual to him in the mesmeric sleep, fixed the instrument, extracted the tooth, which was barred, and therefore more calculated to give pain. *Dr. Perrin found the pulse at this time* 76. M. Talbot discerned no trembling of the hands, such as is common during an effort to disguise the signs of sensibility. The patient rinsed his mouth and was awakened. The moment he awoke, he entreated M. La Fontaine not to allow his tooth to be taken out, because he had no longer any pain; but, finding the blood in his mouth, he applied his hand to it, and discovered that the tooth had been extracted. Dr. Perrin found the pulse now to be 88.

Every one present testified that he had not shown any sign of sensibility.

This report being a faithful detail of the facts which passed before our eyes, we have signed it. March 10, 1841.

LA FONTAINE,
TALBOT-DESCOURTY, *Chir. Dentiste.*"

The pulse was only 76 *while* THE TOOTH WAS EXTRACTING IN HIS PLACID SLEEP, AND 88 AT THE MOMENT WHEN HE LEARNT THE CIRCUMSTANCE.

5. In the summer of 1841, I exhibited such mesmeric facts to Dr. Engledue, Mr. Gardiner, and Mr. Prideaux, of Hampshire, as to convince them of the reality of mesmerism. They have all become powerful and practical supporters of the truth. Mr. Gardiner, by its means soon afterwards cured a young lady in the Isle of Wight of the most distressing nervous symptoms, which had long incapacitated her from either occupation or amusement and resisted all medical treatment. Besides being cured, she exhibited many of the most powerful mesmeric phenomena, which I went over to the Island to witness. In her state of sleep-waking she felt no mechanical injury, and therefore suffered nothing when a tooth was extracted. I will give the particulars of the extraction in the words of Mr. Gardiner:—

"To the Editor of the *Hampshire Telegraph.*

"Sir,—Some erroneous reports having been recently circulated on the subject of an important and interesting experiment, in which Mr. Martin the dentist, of Portsmouth, removed two teeth during the mesmeric trance, without the knowledge or suffering on the part of the patient, I beg you will favour me by inserting the following simple statement of the case. Having been interrupted in the course of certain mesmeric experiments by a violent toothache in one of my patients (whom I had exhibited to Drs. Elliotson and Engledue), it occurred to me that the *insensibility*, which is an invariable concomitant of the true sleep-waking state, would afford me an admirable opportunity of benefiting the sufferer, and of extending the application of mesmerism. My friend, Dr. Engledue, obtained the assistance of Mr. Martin, a gentleman who knew *little*, and believed less, about mesmerism, and *who decidedly questioned the practicability of the proposed operation.* He came. In *two minutes* the patient (a young lady) was in the perfect mesmeric trance, and therefore insensible. Mr. Martin seized the tooth (a molar or jaw tooth) with the forceps—purposely prolonged the *wrench* (as agreed upon by Dr. Engledue prior to his visit, in order to test *thoroughly* the insensibility of the patient), and drew forth the tooth. *Not a pang or symptom of suffering!* In a short time I restored the patient to her natural state in the usual manner. Upon being *told* that the tooth had been extracted, she exclaimed, '*Did I feel it?*'—a singular greeting to a *dentist's* ears! Mr. Martin then proceeded to examine her mouth, and suggested the removal of *another* tooth. The

patient laughingly consented, and sat again. In one minute and a half I again entranced her, and she became of course insensible as before. The tooth being in an advanced stage of decay, was crushed under the instrument, and the remnants were with much trouble extracted.

"During the whole of this trying operation not a groan or complaint escaped the patient. Shortly afterwards I again restored her, upon which she turned to the glass to *ascertain* whether or not she had really lost the second tooth! It would be difficult to determine which party evinced the greater degree of delight and astonishment,—the one having witnessed a novel and most astounding phenomenon,—the other having been *unconsciously*, almost magically, freed from her tormentors.

"I have confined myself to a simple narration of facts, and shall not trespass on your columns by detailing the general phenomena of mesmerism, which are nevertheless of the highest importance and interest. Whenever a new truth is advanced, short-sighted individuals immediately ask '*Cui bono?*'—There is an answer.

"I remain, Sir,
"Your obedient Servant,
"JOHN B. W. S. GARDINER."

"*Portsmouth, Dec. 9th*, 1841."

6. Mr. Prideaux, who practises at Southampton, has had extraordinary experience in this way, and obliged me with the following letter:—

"My dear Sir,

"In compliance with your wishes I have great pleasure in furnishing you with a few brief particulars of the cases in which I have operated on the teeth of patients when in a state of magnetic sleep. My first information of the operation of tooth extraction having been performed during this state, and without pain to the patient, was derived from Teste's "*Manuel pratique du Magnétisme Animal*," published in Paris in 1840; a work not known in this country so much as it deserves to be. Upon becoming myself a magnetiser, I naturally became desirous of trying an experiment so applicable in my own profession, and an opportunity soon presented itself. A patient I was then in the habit of frequently entrancing, and who when in this state had always shown insensibility to the ordinary tests of feeling, such as pricking, pinching, &c., had a great number of decayed teeth and stumps, from which she suffered so much, without being able to summon resolution to undergo their extraction, as gladly to embrace my proposal of being operated upon in the mesmeric state. During the next magnetic sitting, I took the opportunity of removing two of the most troublesome teeth, and with the most perfect success. *The patient sat with the hands quietly folded in the lap,—the countenance was placid and serene,—and the whole attitude that of repose;* in short, not the slightest trace of mental emotion was perceptible, and upon being awakened, it was not till she had examined her mouth that she could credit the reality of her painless release from her tormentors.

"I should have proceeded in the task of extraction on this occasion, but it appeared to me a pity that a phenomenon so interesting in its results to every friend of humanity, from the new era it promised to introduce in operative surgery, and withal so calculated to carry conviction to the minds of sceptics, should be shrouded in comparative privacy, (only one friend was present,) and I accordingly resolved to defer the extraction of the remainder, and invite a party of medical men to be eye-witnesses of the operation. I took an early opportunity of doing so, and on this occasion extracted two teeth and three stumps from the patient, who, to their great amazement, manifested the same insensibility and indifference to the operation as before.

"I have since extracted from the same patient seven teeth and eight stumps, at three different sittings, (making in the whole, eleven teeth and eleven stumps,)

with equally satisfactory results, and I may remark that the patient being comparatively a young person, no absorption of the alveolar process and gum had taken place, but all the teeth were firmly rooted.

"On the last occasion, five teeth and two stumps were extracted preparatory to her being supplied with a set of artificial teeth. Several were from the front of the mouth, and as tooth after tooth was extracted, the patient was excessively diverted at the alteration in her appearance; in fact she could with difficulty control her laughter; and as soon as the operation was over she called for a looking-glass, and holding it up before her *closed* eyes examined her mouth attentively, drawing back the lips on either side with her fingers to get a better view, and finishing by a hearty fit of laughter at the droll figure she presented with her mouth almost toothless. This sitting was witnessed by a friend of mine, Mr. Henry Goode, B. A. of Pembroke College, Cambridge, who chanced to be spending a few days with me at the time, and who will be happy on all occasions to corroborate the account I have just given, as well as to produce the teeth extracted if required.

"I have extracted single teeth from three other patients during mesmeric sleep, with equally satisfactory results, *the insensibility being evidently perfect.* In fact in two of these cases, the patients were *utterly unconscious* during their mesmeric state that any operation had been performed on them, being engaged in a conversation on another subject at the time, which suffered no interruption, beyond a slight indistinctness in articulation during the few seconds the instrument was in the mouth.

"A fifth patient on whom I have operated during the mesmeric state, is a young lady who required to have several of her molares separated with a file on account of the commencement of decay, and one stopped. I found her a most troublesome and restless patient, in her natural state, shrinking when the cavity in her tooth was touched, and complaining greatly of the unpleasantness of the sensation of filing. I succeeded in entrancing her at the first trial in about five minutes, and in this state she allowed me to operate *for two hours with the most passive indifference*, assuring me she felt nothing, except a slight sensation of heat, when the file was used rapidly and continuously for some time together.

"This case is I think interesting and valuable, and affords some evidence in favour of an opinion I brought forward on analogical grounds, in my pamphlet on the Mental Functions, viz.: that there are distinct sets of nerves for feeling and temperature, an idea which you have since informed me suggested itself to Darwin, from seeing a case of paralysis, in which the sense of temperature remained after feeling was lost.

"The subject is certainly one of importance, and I have made several attempts since to *isolate* these two senses, and in one patient with perfect success. The means I employ are, the application to the skin of a glass stopper heated to a temperature just below what would suffice to raise a blister, to test the sensibility to temperature, and pricking with a common needle, to test that of ordinary sensation, and I possess the power of rendering the patient sensible to the heated stopper and insensible to the needle, or insensible to the heated stopper and sensible to the pricking, or insensible or sensible to both, at pleasure.

"Believe me, my dear Sir,

"Yours, very sincerely,

"J. S. PRIDEAUX."

"*Southampton, Nov. 20th*, 1842."

I fear that those members of the Medical Society, who were puzzled by the man's low moaning, will be more puzzled by the lady who was fast asleep and felt not the severest mechanical violence, and yet walked, and talked, and saw. And puzzled they will be till they have studied, as they ought long ago, the history of somnambulism, catalepsy, and the whole of that family of nervous affection. When the ignorance of medical men ceases, [illegible] of innocent patients will no longer be traduced.

7. The following is from the *Jamaica Morning Journal*, October, 1842:—

"To the Editor of the *Morning Journal*.

"Sir,

"I have deemed fit to forward for your consideration, the following unvarnished fact. If after perusal you are disposed to publish it, my consent is freely given. First, however, I must apprise you, that the science of *mesmerism has ever been viewed by me with much prejudice*, and I do not think I should have troubled myself to see the effect of its operation, had it not been for the occurrence which called my profession into action. As a person perfectly disinterested—who had never seen mesmerism practised, I was asked to remove a tooth for a lady while under its influence. I readily acceded, not only from the novelty of the situation, but to enable me to form my own opinion on this (*latterly*) all-engrossing subject. Previously to the arrival of Mr. Garrison of mesmeric celebrity, I examined the tooth on which I was to operate, and found it to be the *dens sapientiæ* on the right upper jaw. The tooth was carious; and although the patient had suffered much pain, yet at this moment, *from my appearance*, she stated herself perfectly free from *toothache*. Satisfied in what manner, and what instrument I should use for the operation, I prepared myself accordingly. Mr. Garrison shortly after arrived, and I think I may say, without fear of contradiction, that this singular operation was performed before *sixty or seventy gentlemen*, most of whom are known to possess high intellectual powers, and the respectability of whom cannot be questioned. During the few moments which Mr. Garrison occupied in placing the lady under mesmeric influence, I kept myself aloof from the patient, and not until I was informed all was ready, would I approach her. In doing so, such part of the room was selected to enable all the bystanders to witness this very singular exhibition. Mr. Garrison then manipulated, to produce a relaxation of those muscles which kept the mouth shut, and gradually effected extension—the head was somewhat elevated—the eyes perfectly closed. I immediately applied the scarificator, and not the slightest wince—*not a movement of the most minute description could I detect!* In the act of introducing the *forceps*, the mouth partly closed, and (forgetting the situation of the patient) I *requested her to extend the mouth, with which she immediately complied.* The tooth was instantaneously removed—the mouth remained extended—the eyes were closed, *not a shrink did I observe—not a muscle did I see move*, and myself and all present were left to form our own opinion. The tooth has *three fangs connected together, forming one large root in a somewhat conical form—the length a little better than three quarters of an inch.* As regards my opinion, when asked, at the conclusion of this singular operation, I expressed myself by no means satisfied, because at *my* bidding the mouth, *the second time, extended*, but I was immediately informed that on *my* desiring the extension, Mr. Garrison (who was at the back of the lady) had again acted on the muscles, and thereby had caused compliance.

"What appeared to me, however, the most inexplicable, was the circumstance *of the mouth retaining its original position, still extended after the removal of the tooth*, which is perfectly unnatural, and which has never been witnessed by me during a practice of twenty-one years, and not until the mesmeric operator manipulated the jaws, to cause contraction, did the patient attempt to eject the blood from her mouth. One of two points—the patient must have been *totally insensible to pain*, or she exhibited an extreme firmness of purpose, and determination *unparalleled*.

"*Mesmerism is a subject I do not comprehend*, and consequently offer no opinion. Did I understand its art, I might perhaps be foremost in the field to uphold its doctrines. As it is, I can only reveal that to which I am a witness, regretting that I do not possess mesmeric influence for the benefit of those who consult me professionally. "I am, your obedient Servant,

"J. Thomas Dias, Surgeon Dentist.

"92, *Orange Street.*"

P.S. I forgot to add, that on the patient being restored to a state of sensibility, she *assured those present that, she was totally unconscious of the operation, and felt no pain.*

"J. T. D."

8. I received the following letter from Mr. Carstairs, of Sheffield:—

"*Devonshire Street, Sheffield, Nov. 17th*, 1842.

"Sir,

"I have the honour to acknowledge the receipt of your favour of the 16th, and proceed at once to comply with your request. Although my experiments have not been so numerous nor so important, *per se*, they are drops in the bucket of truth, which, united with others, tend to prove that operations may be performed without pain through mesmerism.

"In two cases I have extracted teeth: one in one case and two in the other. The patients were females, and *neither of them was aware on being roused from the state of mesmeric coma, that the teeth had been extracted.* In another case of a lad about twelve years of age, I opened a large abscess behind the ear and discharged about a table-spoonful of pus, inserted a dossil of lint, and dressed the wound *without the patient being sensible of pain.* He had not been previously mesmerised, and was not aware of my intention, when I began to make the passes, which were effectual in producing sleep in about five minutes. In another case I cut a large wart from the back of a female's hand, who had been mesmerised by me several times before. I had aroused her, and then produced catalepsy in the arm and hand, so that she saw what I was doing, but *suffered no pain nor inconvenience from the operation*, although an extremely nervous, irritable person. The only other case I have had was inserting a seton, which was accomplished *without the slightest* pain.

"I remain,

"Yours faithfully,

"THOMAS CARSTAIRS."

9. The following is from Dr. Engledue:—

"*Southsea, December 1st*, 1842.

"My dear Doctor,

"I forward you the result of an operation performed during the mesmeric trance.

"Miss K. æt. 17, had suffered for two years from a variety of symptoms, the result of spinal irritation. The right knee was slightly contracted from the commencement of her illness, but for twelve months preceding the operation, the contraction was so complete that it was quite impossible to separate the heel from the back part of the thigh.

"For nearly *three* months she was regularly mesmerised by Mr. Gardiner; all the symptoms were very much relieved, and some altogether removed by this treatment. The knee-joint, however, continued firmly contracted. I shall not now enter into a description of the reasons which prompted me to perform the operation of division of the tendons at the back of the knee-joint, my only object is to report that the operation was performed during the mesmeric trance and *without any manifestation of feeling.* Some hours after the operation, the patient was demesmerized; there was no expression of astonishment and no remark made, till some spots of blood on the sheet of the bed attracted her attention. The proceedings were then explained to her, and the effect can be more easily imagined than described.

"I remain,

"My dear Doctor,

"Sincerely yours,

"W. C. ENGLEDUE."

10. I will now furnish an account, from the *Jamaica Dispatch*, of August 20th, 1842.

"A mesmeric experiment was made at the private residence of a gentleman of this city on Thursday last, at which several physicians and gentlemen of high respectability were present, and which, we are informed by a gentleman who witnessed it, was in every respect successful. The patient, a lady, was put into the magnetic sleep by Professor Garrison; and, while in this state, the painful surgical operation of removing a large excrescence from the upper eyelid, or brow, was performed by Dr. Arnold, assisted by two other physicians, *without the movement of a muscle on the part of the patient, or the least sign of pain.* The patient had long desired the operation to be performed, but had not possessed the fortitude to submit to it, and she was in utter ignorance of the design of the physicians to remove the excrescence on this occasion, and *knew nothing of it until the whole had been done and the wound dressed*, and she had been awakened from her sleep; indeed we are told, that while the wound was being dressed, Professor Garrison *willed* her to sing a favourite air, which she immediately did."

11. The following case I have in the handwriting of the surgeon and Captain Valiant. I have seen the woman and mesmerised her frequently; and have the honour of knowing General Sir Thomas Willshire and Captain Valiant.

"Mrs. Gregory, nursery-woman to Mrs. Valiant, the lady of Captain Valiant, 40th Regiment, for a long time suffering from decayed teeth, which caused much constitutional irritation, applied to me early in May, complaining of headache and pain in the upper jaw, of the most excruciating kind. On examination, the gums were found ulcerated, the alveolar processes carious on the right side, and presenting numerous spicula of bone projecting through the gums, which were exquisitively painful on the slightest pressure with the finger. Filing off the spicula of bone was advised and consented to. The performance of the operation, having been proposed while she was under the influence of mesmeric sleep, was undertaken on the 25th of May, in the presence of Sir Thomas Willshire and Captain Valiant of this garrison. Sleep was speedily induced by Sir Thomas and she was pronounced in a fit state to bear the operation in half an hour.

"An incision was made on either side of the alveolar processes extending from the incisor to the molar teeth, dividing the gums, which were turned back so as to expose the diseased bone. The spicula being considered the principal source of annoyance were filed off smooth with the jaw, the gums approximated, and creosote applied to the carious points. The filing occupied fully five minutes. *The patient, however, to my great astonishment, evinced not the slightest feeling from the operation*, and continued undisturbed in the enjoyment of profound sleep for one hour, at the expiration of which time she was awaked by Sir Thomas, appearing as if aroused from a dream. Some minutes elapsed before perfect consciousness became restored, when she expressed herself *incredulous* that any operation had been performed on her jaw, being quite free from all pain.

"The phenomena evinced could only be elicited by Sir Thomas Willshire, who so kindly afforded his services to the poor woman: they appeared to be completely under his control. By his request her mouth opened to admit my instruments, which she did not feel. His taking wine and cake produced in her corresponding actions and sensations of mastication and deglutition. The pulse rose to 120, and some excitement and spasmodic action supervened on Sir Thomas withdrawing himself for a little. But his approach and contact quieted, and eventually restored, the patient to perfect composure during her slumber.

"*I had hitherto been in the habit of ridiculing, and, indeed, disbelieving, every statement connected with mesmerism; but find it impossible to reject the facts of this case, brought home by the evidences of so many senses.*

"JOHN CHARLTON, M.D.
"*Assistant-Surgeon, Royal Marines.*"

"*Melville Hospital, Chatham,*
"*June 9th*, 1842."

The following statement was drawn up and given to me by Captain Valiant:—

"Elizabeth Gregory, nursery-maid to Mrs. Valiant, usually called Anne, mesmerised by Sir Thomas Willshire, May 25th, 1842, Brompton, Kent.—Sir Thomas commenced at six minutes past one o'clock to mesmerise the patient for a painful operation, to be performed by Dr. Charlton on her jaw and gum, during her sleep. Anne had previously suffered very much from the fracture of the jaw, in consequence of having had five teeth taken out, perhaps unskilfully, at one time. Matter and proud flesh had formed, and caustic had been employed in reducing them. She had also been mesmerised before, for experiment, three times, by Sir Thomas, and the same number of times by Captain Valiant.

"In six minutes Anne was asleep. Soon afterwards Captain Valiant called loudly, without her hearing him; but when Sir Thomas took her hand, and spoke in a low tone, she heard, and answered that she was asleep and comfortable.

"At half-past one o'clock Dr. Charlton *lanced Anne's gum down to the jaw from one end to the other*, and made it bleed considerably, which the patient *did not appear to feel at all.* Dr. C. then filed her jaw-bone for the space of *five minutes and a half* till what he desired was accomplished, which also she *did not feel in the least*—not a muscle nor nerve either twitched or moved. She opened her mouth for the operation to be performed at the command of her mesmeriser, who held her hand, and she constantly opened it wider at his direction. Dr. Charlton mentioned that a *few days ago, when he merely touched the patient's jaw with a probe, she felt the pain so severely as very nearly to faint.* While waiting for some creosote, Sir Thomas took some wine, when Anne went through the form of tasting and drinking, and on being questioned said, she tasted wine. The same experiment was tried with a piece of biscuit, and she said she tasted biscuit. Sir Thomas held a watch over her head, and asked her what it was. She replied—'I don't see it, but I *know* what it is.' It was then held to her waistband; and she said it was a watch. Captain Valiant pinched Sir Thomas's hand, which she immediately felt too, and said somebody was pinching her hand, and she did not like it. Dr. Charlton applied some creosote to the patient's jaw.

"At twenty minutes to three o'clock Sir Thomas awoke her, when *she was not conscious of having had any thing done to her*, and was very thankful to find the operation was over, and wished very much that what had been done to her during her mesmeric sleep might be published, for the good of the world in general."

12. I shall now detail a case which occurred many years ago in Paris;—the mesmeric operator in which—Dr. Chapelain, and the surgical operator—M. Jules Cloquet, are now both alive in that city.

"Madame Plantin, aged 64, living at No. 151, Rue Saint Denis, consulted M. Cloquet, April 8th, 1829, respecting an open cancer which had existed for several years in her breast, and which was complicated with a considerable enlargement of the right axillary ganglions. M. Chapelain, her physician, who had mesmerised her for some months, with the view of dissipating the disease, could effect only a profound sleep, in which sensation appeared suspended, but intellect remained perfect. He suggested to M. Cloquet to operate upon her in the mesmeric sleep-waking. M. Cloquet, having judged the operation indispensable, consented, and it was fixed for the following Sunday, April 1st. The previous two days, she was mesmerised several times by Dr. Chapelain, who prevailed upon her when in the state of sleep-waking to bear the operation without fear, and brought her even to converse about it calmly; although, when she was awake, she could not listen to the proposal for horror.

"On the day fixed, M. Cloquet arrived at half-past ten in the morning, and found the lady dressed in an arm-chair, in the attitude of a person calmly asleep. She had returned about an hour from mass, which she habitually attended at that time of the day. Dr. Chapelain had thrown her into the mesmeric sleep on her return. She spoke with perfect calmness of the operation which she was about to undergo. All being ready she undressed herself, and sat upon a common chair.

"Dr. Chapelain supported her right arm. The left was allowed to hang at her side. M. Pailloux, internal student of the Hospital Saint Louis, had the charge of presenting the instruments and applying the ligatures. The first incision was begun at the arm-pit, and carried above the breast as far as the inner side of the nipple. The second was begun at the same point, and carried under the breast till it met the first. M. Cloquet dissected out the enlarged ganglions with care, on account of their proximity to the axillary arteries, and removed the breast. The operation lasted ten or twelve minutes.

"*During all this time, the patient conversed calmly with the operator, and gave not the least sign of sensibility;** *no movement occurred in the limbs or* FEATURES, *no change in the* RESPIRATION *or* VOICE, *no emotion* EVEN IN THE PULSE, was discernible;† this patient remained uninterruptedly in the same state of automatic indifference and passiveness, (*état d'abandon et d'impassibilité automiques*, or, as Mr. Topham says of his patient, 'uncontrolled, in perfect stillness and repose,' 'like a statue!') in which she was some minutes before the operation. *There was no necessity to restrain her, we had only to support her.* A ligature was applied to the lateral thoracic artery, which was opened in removing the ganglions. The wound was closed with sticking plaster and dressed, and the patient was put to bed, still in the same state of sleep-waking; and was left in this state for eight and forty hours. An hour after the operation a slight hæmorrhage occurred, which proved of no importance.

The first dressing was removed on Tuesday the 14th; the wound was washed and dressed afresh; the patient showed no sign of pain; the pulse was undisturbed. After this dressing, Dr. Chapelain awoke the patient whose sleep-waking had lasted from one hour before the operation, *i. e.* two days. The lady seemed to have *no idea, no conception of what had passed;* but, on learning that she had been operated upon, and seeing her children around her, she experienced a very strong emotion, to which the mesmeriser put an end by immediately sending her to sleep again."

Some of the surgeons of Paris scouted this case just as the London Medical Society, in imitation, scouted that of the amputation. Lisfranc explained it somehow or other, and Baron Larrey accused the poor lady of being an "accomplice of mesmerisers." The latter should have remembered that there was once a soldier named Blanchard, who refused all his advice to part with his right leg on account of fistulous ulcers of the foot, tumefaction of the cellular membrane, a white swelling of the inner ankle, disease of the ligaments, and caries of the tarsal bones, and who was pronounced incurable by the certificates of six physicians and surgeons; that, when the Marquis de Puysegur mentioned to him that by means of mesmerism the poor man was greatly relieved, he burst into a laugh, said the patient would never be cured because the bones were diseased and the periosteum gone, and that amputation would be indispensable. *By mesmerism the poor soldier was completely cured.*‡

I have extracted the case of the lady from the highly-favourable report, in 1831, of the Committee appointed by the French Academy of Medicine to report upon mesmerism, and to be found in Dr. Foisac's excellent work.§ The committee continues thus:—

"The committee sees in this case *the most evident proof* of the suspension of

* She was "not a physiologist," or she would have "enacted the reflex motions."

† This ought to convince Dr. Marshall Hall, who is represented by the *Lancet* to have said in the society, and I hear he did, though I do not remember it,—"*Could the man keep his heart quiet* as he did the muscles of his *face and leg?* Why was not the action of the heart, the number of the pulse, carefully noted? We should then have had *positive proof* of the supposed loss of consciousness in the actual *absence of all emotion.*" He may be referred to the case of the boy mentioned at p. 40.

‡ *Rapports et Discussions de l'Académie Royale de Médecin sur le Magnétisme Animal.* 1833. p. 156.

§ Same book, p. 400.

sensibility during sleep-waking, and declares that, though it did not witness the case, they find it so *stamped with the character of truth*, it has been attested and reported to them by so good an observer who had communicated it to the surgical section, that they do not fear to present it to you as *a most unquestionable proof* of the state of torpor and stupefaction produced by mesmerism."

I may mention that the case is related as perfectly genuine in the *Penny Cyclopædia*, published by our Society for the Diffusion of Useful Knowledge, article *Somnambulism*, in which the truth of mesmerism is admitted to the extent even of *clairvoyance;* Lord Brougham being president of the society, and the Bishop of Durham, several peers, several Fellows of the Royal Society, men of the first distinction in science and literature, and several professors of University College, where a general stand was made against mesmerism, being my colleagues on this committee.

In the *Hermès** it is stated likewise, that M. Cloquet attests not only that there was complete absence of pain, but that, while he was washing the surface around the wound with a sponge, the patient felt tickled, and several times said merrily, "Come, leave off,—don't tickle me." Her laughter, thus occasioned, was heard by M. Plantin—the patient's son, and by Madame Granier, *who were outside the door.*

This remarkable circumstance must be viewed side by side with the uneasiness felt from the blood in the mouth of my patient who had no sensation from the extraction of her tooth, and whose case I have related at p. 40; and with the exquisite sensation she always had both of heat and cold in parts perfectly insensible to pinching, &c.—a fact noticed by me in several other cases, and by Mr. Prideaux in regard to heat in one of his patients, spoken of at p. 43; and in regard to cold in the Spanish Lady mentioned at p. 30, who was comatose without mesmerism.

No man who has a heart can read the narration without being affected, and earnestly hoping it is true. But, though its truth is equally certain as that there is such a surgeon as M. Cloquet, it has lately been denied in England and the parties have been vilely traduced.

In the *London Medical Gazette* for the 2d of last December, immediately after an imperfect and incorrect account of the discussion in the Royal Medical and Chirurgical Society on the paper which detailed the case of amputation in the mesmeric state, is an *anonymous* letter of three paragraphs—signed "a member of the Medical and Chirurgical Society," who is ashamed to give his name, and therefore does the deed in darkness—the first styling the account "very silly" and unfit for the society, the second heartlessly accusing the poor patient of deception, and the third as follows:

"It is rather remarkable that it should have occurred to no one present to mention the case of a woman whose breast was amputated, some years ago in Paris, by M. Cloquet, while she was (as it is supposed) in a state of mesmeric stupor. This woman was believed to have been insensible to pain during the operation; and was a better actor than the man mesmerised by Mr. Topham, as she did not even moan. Some *considerable time* afterwards, however, while dying of an internal complaint in *another hospital*, she *confessed* to the nurse that the *whole had been a cheat;* that she had experienced pain like other persons, but had sufficient command over herself not to show it."

The Nottingham surgeon, to whose letters I have already twice referred, writes,—"some years ago in France the breast of a female was removed while she was professedly in a mesmeric sleep. She died a *few days afterwards;* an operation which in other cases rarely indeed proves fatal. Is it not too probable that the attempt to bury the anguish in her own bosom proved too much for nature to sustain? Another mesmeric operation case succeeded better, but the patient subsequently confessed that her insensibility was all feigned." "Many similar cases have occurred, &c."

* *L' Hermès, Journal du Magnétisme Animal.* Paris, 1829, tom. iv.

Now the statements of both writers are *altogether untrue.*

Madame Plantin was never in an hospital, but the wife of a wealthy merchant of Paris; resided in a country house which she could hardly be prevailed upon to leave in the fine season of spring to take up her abode in Paris for the purpose of being mesmerised, for she disliked mesmerism because it had been tried upon her at different times unsuccessfully, and she was unwilling to submit to the restraint of mesmeric treatment; and she was terrified at the thought of a surgical operation under any circumstances, and declared she would rather die, and had indeed suffered severely from refusing even to be bled in one of her pregnancies.

M. Cloquet testified to the Academy that she was pious, modest, and incapable of any collusion; and Dr. Caldwell of America, hearing a rumour in London that this surgeon confessed he had operated upon other patients in an ordinary state who bore the pain as unmoved, called upon M. Cloquet, in Paris, to ask the question, and told me that he received for answer, "*Jamais! jamais! jamais!*" However, Dr. Davison, a friend of mine, called upon M. Cloquet at my request in January, to make inquiries respecting the case; and the following is an extract from his reply:—

"The letter to which you allude in the *Medical Gazette* is *false* in every particular, save the death of the patient. The lady was *never the inmate of an hospital.* She was the wife of a rich *negociant*, an excellent person, respected by all who knew her. She died *above a fortnight* after the operation, of a *pleurisy*;* the wound having done well, and she having taken a drive some days previously. Cloquet saw her and is *quite sure that she never made the confession alluded to.*"

As to the other case, spoken of by the Nottingham surgeon, Dr. Davison has made every inquiry in Paris, and cannot learn that it ever occurred. "Many similar cases have occurred!" I call upon him to make good all his assertions. He knows that Mr. Wood flatly contradicted him in *The Nottingham Journal* in regard to the one, and pointed out that he gave no authority whatever for the others: yet, though two months have elapsed, this candid person has never replied or ventured to recur to the subject.

It was most improper in the *Medical Gazette* to insert a serious *anonymous* charge against a person now no more—and that person a female, a foreigner, and whose family are now all resident in Paris and of great respectability; and shameful in the Nottingham surgeon to make these wholesale accusations, not one of which he has been able to prove.

The unscrupulousness of so many medical men to blacken the characters of their fellow-creatures, already one would think sufficiently afflicted, by accusing them, without any other reason than their own ignorance, of imposture, is a foul spot upon the profession. Wherever a person displays mesmeric phenomena, or is cured or even relieved by mesmerism, he is at once impudently called an impostor, and any sort of thing fabricated to support the cruel charge.

"L'homme est de glace aux vérités;
Il est de feu pour le mensonge."
La Fontaine.

The Okeys not only were impostors, but confessed the imposition!

In a letter, *paid for as an advertisement*, in the *Newry Telegraph* for last February 9, signed—

J. Morison, M.D.
J. Woods, Surgeon,
W. Starkey, M.D.
G. H. Kidds, L.R.C.S.

are these words,—"If we except Dr. Elliotson—whose mind always exhibited a

*The appearance of the inflamed pleura and lung after death are fully detailed in the *Hermès.*

tendency to wild and extravagant theories, and who in consequence of his attachment to the marvellous lost his chair in the London University, as also his standing as a practitioner—all the others, as Mesmer, Dupotet, La Fontaine, preached the mesmeric doctrines to some advantage, if not to the public, at least to themselves." I never knew even the names of these four gentlemen before, but they ought to be aware that the character of my mind is the opposite of what they aver. I have never speculated, but have always devoted myself to the observation of facts; so that, whatever I have advanced, I have seen ultimately established. I appeal to my writings on Quinine, Hydrocyanic Acid, Iron, Creosote, Glanders, the Use of the Ear in ascertaining the State of the Heart, my *Human Physiology*, and my *Lectures on the Practice of Medicine* and my *Clinical Lectures*. I came into practice solely from the devotion to facts evinced in my Clinical Lectures. Phrenology I have lived to see established, though it had not twenty advocates in this country when I first wrote in its favour; and in it I have adhered so closely to facts that I have not yet admitted an amount of statement which is current among eminent phrenologists. However, let this pass.

"The Okeys," these gentlemen further say, "were proved to be impostors,"*

* I make the following extract from the letter which I addressed to my pupils on resigning my chair in University College, and which is to be had at M. Baillière's:—

"In an evil hour, I consented to show some experiments to the Editor of the *Lancet*, after repeated entreaties conveyed by his assistant, Mr. Mills, who had witnessed the phenomena at the hospital, reported many in the *Lancet*, been enraptured with them, and declared them over and over again to be so satisfactory that to doubt or to suspect the two Okeys of imposition would be the height of absurdity. I exhibited to the Editor the production of the singular delirium, and a variety of the most beautiful and satisfactory experiments which he has *entirely suppressed*. But I presently feared what would be the result. He said he was pestered with letters upon the subject; but that nineteen out of twenty were unfavourable. Nineteen persons, of course, purchase more *Lancets* than one; and I fancied I already saw his rejection of the evidence. The mental phenomena were such as no person capable of sound and refined observation, and fitted for philosophical investigation, could for an instant have imagined to be feigned. The physical phenomena with the hand, the eye, metals, and water, were as striking and conclusive, with the exception of some with lead and nickel; and those I have since proved to large numbers of able judges to be equally conclusive. Mesmerised nickel produces upon the elder sister the most violent effects, which none but a very ignorant person could consider pretended. Now, when this, or gold or silver, has been rubbed upon a part, and the friction has been desisted from before the effects come, or the effects have come and have ceased, they may be at once excited in the former case, or re-excited in the latter, by friction of the part with any thing—a piece of wood or a piece of lead; and this excitement may be produced again and again. Friction was performed with lead upon parts to which nickel had been applied either with or without effect as it might be, and the effects took place violently. This explanation I gave to the Editor, but he was either too dull to understand, or had his reasons for not understanding. In another set of experiments lead produced effects, though nickel had not been applied to the parts; and yet I never had been able to mesmerise lead by holding it in my hand and to produce effects by then applying it. Those effects I candidly said I could not explain, since I had not commenced experiments with lead or nickel for more than two or three days; but, as there was no more deception in the cases, nor less certainty of the various facts which I had observed, than in chemistry or any other natural science, I added that these results showed only that they required farther investigation, and that I had no doubt I should, by perseverance, discover their cause. The Editor knew that I was about to leave London that same day for an absence of six weeks on the continent, and yet he could not wait for my return and give me an opportunity of farther research, but, with that gentlemanly delicacy for which he and his friends are so remarkable, published, almost immediately, what professed to be an account of what he had seen,—a most imperfect and worthless account, however; in his plenitude of scientific importance, he declared that not one more experiment on magnetism would ever be required; and answers which were sent he never published. He omitted to state a circumstance in his experiments with lead, which had never been allowed to happen in mine, but which, when reflecting upon them on my tour, I thought might have influenced the results. In employing the lead, I had noticed that he applied it against a piece of nickel held in his other hand, before he applied it to the patient. On my return, I applied lead to her as before, and, indeed, copper also; yet never obtained an effect. I then applied the lead or the copper, as it might be, against a piece of mesmerised nickel or gold, before applying it to her; and its application to her was then always productive of effects. I discovered that the surface of the lead or copper had become nickelized or aurified by the

and *afterwards acknowledged the tricks which they had practised* on the credulity of Elliotson." The only reply to be made is, that *this is totally untrue.* One of them was said by Mr. Wakley to have been reported to have figured at Irving's chapel. The report was not only totally untrue, but I cannot find that it existed before it appeared in the *Lancet.* Mr. Wakley, like Dr. Johnson, is a father, and he should have some feeling for innocent young females, who, though in the humbler walks of life, are not his inferiors in respectability. He even advertised in the morning papers "An editorial article on the tricks and deceptions practised by performers and patients under the stale name of animal magnetism, showing the total failure of the patients to fulfil the promises of the magnetisers, when the signals which pass between them are effectually disallowed."

However, his day of triumph has passed, and his chief business now must be to consider how he can best extricate himself from the sad position into which he has fallen from having so overcunningly, hastily, and violently committed himself. Some say he is ready to hang himself. But I implore him for the sake of science and humanity not to think of such a folly, nor to imitate the dignified exit of the Tartar General, who, according to the dispatch of Sir H. Pottinger, "retired to his house when he saw that all was lost, made his servants set it on fire, and sat in his chair till he was burnt to death."

Not only the occurrence of mesmeric phenomena, but even improvement from mesmerism is sufficient to subject an innocent person to the charge of imposition.

Above a year ago I was first requested to visit a patient whom I found labouring under a very severe form of St. Vitus's dance of NINE years' duration. The disease is very common; but I have seen only a few instances of so long a duration of it, and never one of such violence as it generally exerted on the organs of respiration at night. We meet daily with persons who have constant twitchings of the features and workings of the head, arms, or trunk; but this was *general*, as well as *constant*, and often *most frightful.* To suppose the case as one of imposition would have been as ridiculous as to suppose a case of confluent small pox to be an imposition. Such movements night and day for nine years,—nay, such movements for a day, I defy any human being to make voluntarily. The patient, though shut out from society, except that of intimate friends, and from all public amusement, bore this sad affliction so patiently as to increase one's pity. Dr. Marshall Hall had attended, and given the following opinion of the case:—"*Chronic inflammation of the membranes in which the spinal marrow is inclosed, with the effusion of lymph or serum, and consequent irritation of the spinal marrow itself, with the spasmodic actions which such irritation is calculated to induce. The essential character is its chronic form.*" So real and severe did he consider the case, that he prescribed *mustard cataplasms to the spine, cupping on the back of the neck* EVERY FIFTH DAY, *and mercury to such an extent that not one sound tooth is left in the patient's head:* and declared he

contact; and thus the difficulty was solved. These experiments I have repeated again and again before numbers of gentlemen, taking the greatest care that the patient should not know when I applied lead or copper which had not been in contact with nickel or gold, and when I applied lead or copper which had been in contact with either of them; and the results have been uniform. I was obliged to leave the poor little girl in an intense coma, with occasional violent tetanic spasms, at the Editor's house, little imagining that any farther experiments would be attempted, especially in my absence, by a person ignorant of the subject and altogether incapable of making experiments. I had seen sufficient of the extreme carelessness, and want of information and philosophic power, of the Editor, during the experiments conducted by myself, and which he frequently altogether deranged, not to be convinced that in my absence no experiment could be made in a manner to justify conclusions. In his ignorance, he acted as though mesmeric susceptibility is always present and always the same: whereas the reverse is the fact; and experiments with water and metals frequently repeated so derange the susceptibility that we are often obliged to desist.

"During the five months which have elapsed since my return, I have repeated all my experiments and continued my observations, not only on the two Okeys, but on other patients; and all the results of my former enquiries have been confirmed and all difficulties solved."

would have treated his own child in the same manner. He treated the case for *three* months, and wished to continue his plan for *a twelvemonth*. But, though the poor patient submitted patiently to be thus disfigured, the family medical attendant and friends could not allow it, and Sir Benjamin Brodie was consulted, who *condemned the treatment in the most unqualified manner*, declined to prescribe medicines or to see the patient again, and stated that nothing more could be done than to endeavour by every means to strengthen the debilitated frame. Dr. Hall, however, wrote a letter, still in possession of the family, maintaining his opinion, and treating Sir Benjamin Brodie's opinion most contemptuously. Some months since, when asked my opinion of mesmerism in the case, I replied that, though I had *never* failed in curing the disease with oxyd of iron in children and youth, when it had not lasted more than some months, I had never succeeded with iron or any other medicine when it had lasted some years and in adults: that I had never known mesmerism to fail any more than iron in the former cases: but that, as iron failed in the latter, I could not venture to hope that mesmerism would succeed. I advised that, as mesmerism had been begun, it should be continued rather than the case be abandoned; though I entreated them not to be disappointed if no good resulted. For the last four months mesmerism has been daily persevered with; and the gradual but steady improvement in the strength, the sleep, and looks of the patient, and the decline of the disease, astonishes every one. Now that Dr. Hall has learnt the improvement by mesmerism, he says that he *all along* (while cupping every five days, and giving mercury freely, and proposing to do all this for twelve months!) suspected, and is *now* (mesmerism having done great good,) *perfectly certain*, that the case was *feigned!!* I should like to observe his countenance when he says so.

Of all persons Dr. Hall should be careful. Because, in his introductory lecture,* he is at great pains to impress upon his pupils the duty of being careful in investigating cases so as not to accuse a sick person of imposition. He quotes the following passage from a physician of a Parisian hospital, as "*candid and touching*."—"How frequently does it happen that individuals labouring under inflammation of the cerebral membranes, have been treated as malingerers, or as being of lazy disposition. A young girl is brought to the hospital without any apparent functional disease: she is morose and stupid, and answers only by monosyllables after having been frequently and earnestly interrogated. The physician *mistakes this for caprice or dissimulation*, but she *dies*." "I shall never forgive myself for having committed a similar error with regard to a schoolboy." "The expression of this boy's countenance was perfectly natural; the pulse not accelerated; he lay in bed, with the knees drawn up to the chin, making no complaint of suffering, and merely anxious to be amused by entertaining stories. *I made the child get up:* he did so, but remained moping about the chimney corner. *I compelled him to walk up and down the room;* his steps were uncertain, like those of a drunken man. This poor child was *forcibly dressed*, and even *beaten* by his parents" (the treatment prescribed with a promise of certain success for Dr. Wilson's poor boy by Mr. Bransby Cooper),† "who thought he affected to be ill. I was soon, however, painfully convinced of the error into which we had fallen; the *poor boy died* of hydrocephalus."

It was but in the same way that those naval men acted who were tried in December last for killing a poor man of colour, whom they chose to fancy an impostor. He was cook, and had been unwell for some days. Being in his berth, he was ordered to prepare breakfast, but said he was very ill. "You skulking ——, *there is nothing the matter with you*," was the chief mate's reply. To that the sick creature answers, "Really, sir, you do not know my feelings:" and the reply was, "You lazy fellow, if you don't attend to my orders I will send down some tackle and heave you up." As he lay in his bed in the forecastle he was heard to groan, and that caused another to say, "If you don't hold your noise, I'll

* *Lancet*, Oct. 7th, 1837, p. 40.

† *Lancet*, March 11th, 1843, p. 876.

put a rope's end round your neck." The threat was executed; the rope was drawn *tightly round his neck*, and he was *pulled forcibly from his berth.* As he seemed strangling, the rope was shifted to his chest, and he was hauled upon deck, and his head as he went up struck against the scuttle. *Shortly afterwards he was found dead.*—The impostor.

To accuse patients of imposition is very easy. But it is a very vulgar, as well as cruel, habit, founded on ignorance, presumption, and heartlessness. We should never prefer such an accusation on light grounds: and, to be assured of the grounds, we should be well acquainted with the subject. He who is ignorant of a subject is surely not justified in giving an opinion: and yet, medical men and others, because they are ignorant of the phenomena of the more wonderful and uncommon diseases of the nervous system, and of mesmerism, preposterously pronounce the subjects of them impostors, and those who know the truth, to be fools, or rogues, or in league with the devil. It was the same cause which made the people pronounce Democritus mad, when he looked for the source of insanity in the brain; to pronounce Roger Bacon a sorcerer, who knew physical facts of which they were ignorant; to ascribe epilepsy to St. Vitus's dance, and numerous other diseases, to demoniacal possession;* to ascribe the phenomena of electrical and galvanic apparatus to the agency of spirits, as the savage supposed there must be a spirit inside the watch. Of peasants better things could not be expected: but the whole of education is so unsound that gross ignorance and superstition exist among those who presume to teach, and have been judged fit for instructing others, and believe they have received the Creator of the Universe, or the Holy Spirit, into their persons at the ceremony of episcopal ordination, but should be compelled

> "To cast their orders at their bishop's feet,
> Take their dishonoured gown to Monmouth-street."
> *Cowper.*

The Abbé Wurts of Lyons, in a work on the *Superstitions of Philosophers*, wrote, at the beginning of this century, that, although all belief in the devil was apparently given up, he was really the chief personage, though disguised, in the lodges of freemasons, mansions, and palaces, and acted sometimes under the form of a wonderful man, a physical philosopher, a *mesmeriser*, &c.

Another Catholic author, in a book published not many years ago in France, wrote thus:—"The effects of mesmerism are not explicable by any natural causes. No natural means are employed to produce them. Mesmerism is a stratagem invented by the devil to seduce souls, to increase the number of his adherents, and oppose the works of Jesus Christ and his ministers. No Christian can employ mesmerism for himself or others without mortal sin. Mesmerism undermines faith and morals. Government ought to proscribe it. In order to be initiated into its mysteries, Jesus Christ must be denied, and the cross trampled upon. All mesmerisers are disciples of Lucifer."†

How slavishly does the alleged Protestant writer of a disgraceful English sermon, of which not a copy would have sold but for the wretched state of our education, adopt the thoughts and words of the Roman Catholics, against whom he is so fierce. Thus vaccination was discovered to be Antichrist, and sermons were furiously preached against it when I was a boy, as they had been previously against the inoculation of small pox. Thus we read that the miraculous cures of Christ when he was thought "beside himself" by "his friends," were attributed to the devil,‡ as though this were so benevolent an individual.

Ignorance mistaken for knowledge, is a frightful perpetrator of injustice and cruelty. Were I a preacher, there is one sin,—a daily, hourly sin—one productive, unheeded, of immense mischief,—against which I would lift my voice in

* See the Rev. Hugh Farmer's *Essay on the Demoniacs.*
† Foissac, pp. 251, 394.
‡ Mark iii., 21, 22.

season and out of season, but which I never once in my whole life heard preached against, though I find it treated of in one of the late Dr. Arnold's sermons. It is the sin of presuming to hold opinions upon which we have not qualified ourselves to have any opinion at all. Men and women, young and old, educated and uneducated, rich and poor, equally commit this from morning to night, committing it not only in word but in action: and yet they, in superficial routine, pray to God to keep them from presumptuous sins,—"Keep thy servant also from presumptuous sins."*

Of all classes, the medical profession should conduct themselves the most rationally. They profess to be very *scientific*, *liberal*, and *humane*.

It is the character of a *scientific* man to acknowledge that he is only an observer of the universe, and of a minute fraction of it; that he comes into existence with his peculiar nature and is placed here, without his own interference, and has had no share in constructing the universe; that he must admit all that he finds, and could never have imagined what he does find; that he can explain nothing, and what he calls explanation is merely the placing of various facts under the same head. Medical men constantly refuse to admit facts, because they presumptuously suppose beforehand that such facts are not; thus creating the world according to their poor narrow conceptions, and forgetting that it is their duty to be "humble, teachable and mild."

Those who declare they would not believe the facts of mesmerism if they saw them, could not have believed the miracles had they lived in the days of Christ, and cannot in reason now, because they must believe on the reported evidence of other men's senses instead of their own. An exemplary clergyman once said to me, "How can I refuse to believe the facts of mesmerism and say that I believe the miracles?" A friend of mine on coming up to town this spring, enquired earnestly if the case of amputation had occurred at all, since the existence of Wombell, Mr. Ward, and Mr. Topham, was altogether denied in his part of the country.

It is the character of a *liberal* man to give others credit for sincerity, a love of truth, industry, and sense equal with his own; yet they are puffed up, thanking God that they are not such fools as some other men are,—even as this mesmeriser.

"Plagiarist! liar! impostor! heretic! were among the expressions of malignant hatred lavished upon Galileo," in 1609.†

Deleuze proved in 1819 that our "adversaries do not know mesmerism, give its partizans credit for absurd opinions, pass over in silence the most convincing proofs, while they refute facts which nobody maintains, and, when forced to confess incontestable phenomena, ascribe them to something inadequate to produce them."‡

Foissac, in 1833, complained that "able men write daily against mesmerism without knowing any thing about it, or having studied it, and do not hesitate to insult and defame those who feel it a duty to do homage to truth, in receiving the testimony of their senses and obeying their conscience."§

The conduct of many up to 1843 shows that they have not advanced in wisdom.

A friend told me he had sent a copy of Mr. Topham's pamphlet to a Fellow of the College of Physicians, who returned it unopened.

It is the character of a *humane* man to be anxious that all promises of benefit to his fellow-creatures may be fulfilled; that every alleged means of curing disease may turn out, not a fallacy, but a reality,—to "hope all things." Medical men should be the humblest of all practitioners of art. Highly as I estimate the powers of my art, when carefully and earnestly employed, and invaluable as is a skilful, laborious, and conscientious medical man, we know in our hearts that we have yet but an insufficient insight into disease; that the investigation of cases is too difficult and too laborious to be carried on efficiently, in the greater number

* Psalm xix.
† *Life of Galileo, published by the Society for the Diffusion of Useful Knowledge*, p. 30.
‡ Foissac, p. 241. § Ibid. p. 551.

of them, by persons who see many in the day, whether in charities or in a profitable round; that well established measures require more pains for their perfect administration than are generally given; that for a very large number of cases our means are very inadequate, for many all but useless; and that medical men are receiving money every day for doing little or no good. Were not their art so imperfect, they would not have to complain, as they do everlastingly, of the prosperity of quacks and persons altogether, and not, like themselves, in part, pretenders. They should each feel it a duty strenuously to be looking out for improvements of their art; and satisfied that it may be as greatly improved as any other art, they, instead of hugging themselves on their receipts and sneering lazily at the disinterestedly industrious, when a new fact or remedy is mentioned, should hopefully listen, and determine to ascertain what amount of good it contains, ashamed of the errors and vices of their predecessors, who violently opposed the truths of the circulation,—the lacteals, and then of the lymphatics,—the physiology of the brain,—inoculation, and then of vaccination,—bark,—antimony, &c;—remembering that our College of Physicians imprisoned one physician for employing cantharides, and another for differing from Galen; that Ambrose Paré was "hooted" for tying wounded arteries instead of applying boiling pitch, the pain of which they thought nothing of, and which Dr. Copland would have admired; that just as the course of the earth taught by Pythagoras had to be taught afresh by Copernicus, at the end of two thousand years, after being reviled, and then again required all the powers of Newton for its demonstration, so the truth of nerves of sense and motion being distinct fell into contempt in the last century, and no preparation of that ancient and powerful remedy, colchicum, was in the London Pharmacopœia when I was student at St. Thomas's and Guy's Hospitals, in 1808.

The happiness of a scientific, liberal, and humane course they would find great beyond all expectation. They would feel raised as men, and be enabled not to view their poor coterie, or college, or profession, as their world, fashioning their opinions, and habits, and whole nature by its cramping influence; but, regarding themselves as a part of universal nature, would find themselves always moving freely in it, would keep their regards constantly upon its truths only, and, walking happily onwards, bestow no more attention upon the sayings and doings of the coteries and prosperous men of the moment, than upon the noisy sparrows which flutter and chirp outside their window to-day and will not be heard of to-morrow.

If I have expressed myself strongly in this pamphlet, it is what I intended. The adversaries of mesmerism and of mesmerists have had their full sway hitherto, and they must be thankful for a change. Our turn is now come. Their conduct has shown that patience, sincerity, disinterestedness, and mild persuasion are lost upon them. Our objects are of incalculable importance,—the establishment of means to cure diseases at present more or less troublesome, difficult or impossible to cure,—the prevention of pain in surgical operations,—and possibly other advances on which I will not venture at present to say anything. This must require a great effort, for it will form an era in the history of man; and those who are willing to assist must be in earnest. I feel no hostility to our opponents. They merely act the part of puppets;—not knowing why they so act, and blindly obeying the general laws by which a supply of opponents to every truth and improvement is always provided. The statistics of opposition to good things would show that their course obeys fixed laws; and they are to be pitied for being destined to the parts which they so eagerly perform.

FINIS.

MESMERISM IN INDIA,

AND ITS

PRACTICAL APPLICATION IN SURGERY AND MEDICINE.

BY

JAMES ESDAILE, M.D.

CIVIL ASSISTANT SURGEON, H.C.S. BENGAL.

" I rather choose to endure the wounds of those darts which envy casteth at novelty, than to go on safely and sleepily in the easy ways of ancient mistakings."—RALEIGH.

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1846.

TO THE

REV. JAMES ESDAILE, D.D.

My dear Father,

However new and strange the subject of this Work may be to you, I am sure that it will afford you pleasure to know that I have introduced, and I hope I may say established, a new and powerful means of alleviating human suffering among the natives of Bengal.

I shall soon ascertain to what extent other varieties of mankind are capable of benefiting by this natural curative power, as I am ordered to join the army in the field, and depart to-morrow, by dâk, a journey of eleven hundred miles!

I am

Your affectionate Son,

James Esdaile.

Hooghly,
Feb. 1st, 1846.

PREFACE.

If this production should be fortunate enough to attract attention *at home*, I hope that criticism will be chiefly expended upon a careful examination of the alleged *facts*, and their practical application to the improvement of Surgery and Medicine.

What I now offer to the public is the result of only eight months' mesmeric practice, in a country charity hospital; but it has been sufficient to demonstrate the singular and most beneficial influence that Mesmerism exerts over the constitution of the people of Bengal, and that *painless* surgical operations, and other medical advantages, are their natural birthright; of which I hope they will be no longer deprived.

Duty calls me to another and more extensive field (the Civil Surgeons being ordered to join

the army of the Sutlej), where I hope to work out this curious and interesting subject in all its practical bearings, and to live to communicate my experience to the public.

Hooghly,
Feb. 1st, 1846.

EDITOR'S PREFACE.

Appearing before the public as the Editor of a work on Mesmerism, I trust I may be pardoned for alluding to the circumstances under which I have been called upon to undertake such a duty. Several months ago my brother, a medical officer in the service of the East India Company, surprised me by announcing that he had now found something to dispel the *ennui* of Indian life, and that his mission was to become "the Apostle of Mesmerism in India." More than twelve years ago, my attention had been arrested by reading M. Cloquet's account of his having removed a cancerous breast from a lady while in the mesmeric trance, and by his certifying her insensibility to pain. Knowing the eminence of M. Cloquet as a surgeon, and his reputation as a man of veracity, I was constrained to believe in the reality of the mysterious agent denominated Mesmerism, or Animal Magnetism; and my belief

was confirmed by the fact of the operator not being a believer in Mesmerism. From that hour I never doubted that many things, scouted by most people as frauds or delusions, were merely new manifestations of this incomprehensible power. The evidence was so strong, that incredulity seemed irrational. Professional avocations hindered me paying further attention to the subject; and I had almost ceased to think of Mesmerism when it was again unexpectedly brought before me by my brother. Being thoroughly convinced of his honesty, as well as of his ability to detect imposture, I read his communications, transmitted from time to time, with the liveliest interest, and rejoiced to be at length informed that he was about to communicate his experience to the public; and that he relied on my services in seeing his Work through the press, and in making any necessary alterations in the MS.

A determination to know the truth, and to afford to others the opportunity of investigating it for themselves, has induced me to read my brother's Work with care, and to undertake the responsibility of preparing it for the press. In justice to him I must add, that the only alterations I have made in the MS. have been merely verbal; so that whatever merit is due to the Work,

either as a literary performance, or a philosophical treatise upon an imperfectly understood branch of science, none of it belongs to me.

While he will be gratified to learn that his literary offspring has assumed so little of the aspect of a changeling, by being transferred to my care, I fear that on another point he will be mortified, and that some of his readers will share in his regret. His MS. was accompanied by nine beautifully executed drawings, also intended for publication. After consulting with friends interested in Mesmerism, it has been resolved that these drawings shall not be published, but remain in the hands of Messrs. Longman and Co. for the inspection of the scientific, and the curious. They are very striking; but, unfortunately, their very fidelity is a reason for their non-publication, for, assuredly, they are fitted to shock the delicate, who are unaccustomed to witness the fearful ravages of disease on the human frame. Moreover, to publish them would add materially to the price of the Work—a result which would frustrate, to some extent at least, the object of the Author, who obviously desires that the British public shall have every facility in procuring information regarding the derided science of which, and with such good reason, he is so decided an advocate.

On the probable reception of the Work in this country, it may be imprudent to speculate; but I cannot help hoping that the evident honesty of the writer, and his willingness to receive assistance, even from his opponents, in detecting the imposture of Mesmerism, if imposture it be, will conciliate the most incredulous, and induce them calmly to examine a multitude of facts accumulated by a man who has never been suspected to be either a knave or a fool. Every body is alike interested in fair play being afforded to the propounders of the strange facts and theories connected with Mesmerism. It is to be borne in mind, that it may be used for evil as well as for good; and that, if we obstinately refuse even to examine the subject, we expose ourselves, defenceless, to the abuse of a power capable of being perverted to the most nefarious ends. This, perhaps, will not be reckoned a fanciful danger by those who carefully peruse the Author's remarks on the singular trial for the abduction of a boy. And if from this case, corroborated by the general impression in India of the frequency of far more detestable crimes, the public arrive at the conviction that Mesmerism is a terrible engine in the hands of a villain, as we have good reason for believing it to be, surely our legislators, who

spend laborious nights in perfecting bills of pains and penalties against the felonious abductors of favourite poodles and the various members of the canine race, will see it to be their duty to make the practice of Mesmerism penal, save by regularly educated medical men. If my brother's book do nothing more than rouse the public to a sense of danger, it will not have been written in vain. Small as is my personal experience of Mesmerism, I have yet, with my own hands, done enough to impress me with a profound conviction that, manifold as are the blessings it confers, it must be used with care, and that it is a most formidable source of mischief in the hands of the ignorant and the unprincipled. In a note, in the body of the work, will be found an account of the influence I exerted over a young gentleman in London. I can now relate a still more striking case. When lately inviting a lady to pay me a visit, I thus wrote to her: —"Unbeliever in Mesmerism as you are, I hope to convince you of its reality by setting you asleep." In her reply she observed: —"You will, indeed, find me hard to be convinced; but if you can procure me refreshing sleep, it will be the greatest blessing, for I have not had a sound sleep for eighteen months." Knowing the anguish she had endured by family

bereavements, and that her health was much impaired, a desire to relieve her sufferings made me resolve to try whether she could be brought under the influence of Mesmerism. An opportunity presented itself shortly after her arrival here. On the evening of the 9th of this month (June), the oppressive heat of the weather rendered her languid; her voice was very rough, and she was evidently labouring under a slight attack of bronchitis. Believing that the inflammation might be subdued by means of Mesmerism, I requested permission to try its efficacy. This having been kindly granted, I subjected her to the usual manipulation for half an hour. She became perfectly placid, but did not fall asleep; she was merely drowsy, and disinclined to rise. No marked symptoms having been exhibited, I concluded that the experiment had failed; but, next morning, I was agreeably surprised to learn that she had passed a most comfortable night, and had slept for seven hours and a half without waking. Her voice also was clear, the expression of languor had left her countenance, and she felt so well that she ventured to dine at the house of a friend, distant three miles from the Manse. Whatever was the cause of the improvement, I was delighted to see my friend evidently better, and

resolved again to mesmerise her. On our return from a saunter in the garden, on the evening of the 11th (June), she lay down on the sofa, waiting the entrance of the servants to prayers. As they happened to be longer in coming than we expected, I said, "Suppose I try to mesmerise you?" The reply being "Very well," I commenced my manipulations at five minutes before ten. Before that hour struck, we had the following conversation. "Oh! I am very sleepy."—"Do you really think I am exerting any influence over you?"—"How can I doubt it? I never felt this way before. I am in a state of the most delightful placidity."—"Why, then, I had better put off the prayers, and keep the house quiet for a little."—"No, no; don't do that. I am very drowsy,"—and with these words she relinquished the attempt to rise, and sank her head on the pillow. Having slipped out of the room, and ordered no noise to be made, I found her on my return still very somnolent, and, without saying another word, proceeded with my manipulations for twenty minutes. I then spoke, and, receiving no answer, proceeded to get a witness of my subsequent doings. Calling my housekeeper, I said —"Come and try if you can waken Mrs. C.: I have mesmerised her, I think." She tried every

means so to do, but in vain. Her respect for the lady would not allow her to obey my order to prick her with a pin; I therefore took a sharp-pointed instrument, and pricked her hand till the marks were visible. No uneasiness being manifested, I was now certain that the mesmeric sleep was established, and proceeded to test its intensity by loudly calling, and clapping my hands close to the face of the sleeper. Not a feature moved; and the exquisitely placid countenance of my entranced friend will long live in my memory.

As she was laid on a sofa in the dining-room, I could not permit her to remain there without sitting up all night to watch her, or causing my servants to do so. Circumstances rendering this inconvenient, I proceeded, at 11 o'clock, to demesmerise her. This proved a work of the greatest difficulty: for half an hour I used all the methods resorted to by the mesmerists, but with hardly any success. Being resolved, however, to break in upon her repose, I applied the strongest smelling salts to her nostrils, threw cold water on her face, and blew upon it with a pair of bellows. This rough usage roused her a little; but even after I got her to sit up, she fell helplessly into my arms, and, if let alone, would instantly have been as fast asleep as ever.

On questioning her next morning, she could give no account of what had happened. She only remembered that she lay down, and that I soon made her very drowsy. She acknowledged that I might have done with her whatever I chose, and expressed her conviction that had I amputated a limb, she would have been unconscious of the operation. What a power, then, is this for evil as well as for good! How foolish in people to expose themselves to the machinations of the wicked, by treating Mesmerism as a fraud or a delusion! *It is a fact,* proved by incontestable evidence; and capable of being applied to the relief of suffering humanity, or perverted so as to accomplish the designs of villany. As a clergyman, I shall be happy to apply it, gratuitously for the relief of the sick, until medical men become convinced of the therapeutic value of Mesmerism, and introduce it into their practice. And for the encouragement of non-professional persons, who, like myself, are anxious to investigate the truth, I am glad to be able to state that a benevolent bishop in England, and his amiable family, are successfully employed in relieving the afflicted; and that my friend Mrs. C. expresses the warmest gratitude for the benefit she has derived from my mesmeric treatment.

The above remarks are for the general reader. I would now respectfully invite the attention of the medical profession to the facts detailed by my brother. He is neither a quack nor an enthusiast, but a regularly educated, truth-loving physician, whose reputation for talent and honesty is unquestionable. The facts he adduces cannot be controverted, and, as I was happy to learn from a medical man just arrived from Hooghly, are admitted both by Europeans and natives, on the spot where they occurred. If he, then, in eight months, has performed no less than seventy-six operations, besides relieving eighteen medical cases, how can medical men in this country justify their heartless apathy in regard to Mesmerism? It is a fact, in the highest degree disgraceful to them, that our doctors will not be persuaded even to try whether their patients can be benefited by the mesmeric agency. They insist on going on inflicting tortures, without an attempt to ascertain whether they may not be obviated by Mesmerism. The Royal Medical and Chirurgical Society of London permitted Dr. Copland, without a word of disapprobation, to declare that "pain is a wise provision of nature; and patients ought to suffer pain while their surgeon is operating; they are all the better for it, and recover

better." A London dentist has announced that several of his fraternity have resolved not to extract the teeth of persons in the mesmeric sleep! By this combination of doctors and dentists, we are threatened with the infliction of pain, whenever we are so unfortunate as to fall into their hands; and our agonies are to be soothed by Dr. Copland's pious assurance that pain is a wise infliction intended for good! Let others do as they please, for myself I shall only say, that, having twice suffered under the surgeon's knife, all the doctors in Europe shall not persuade me to permit them again to mangle my "pleasant flesh," until a persevering attempt has been made to reduce me to insensibility by means of Mesmerism. As the best persuasive to induce sufferers to form a similar resolution, I request their attention to the subjoined *résumé* of my brother's mesmeric practice, as published by him in a Calcutta newspaper, on the eve of his departure for the army of the Punjaub.

It now only remains that I should publicly offer my warmest thanks to Dr. Gregory, Professor of Chemistry in the University of Edinburgh, and to Mr. Colquhoun, author of "Isis Revelata," and many other well-known works,

for the highly flattering commendations they have bestowed on my brother's labours, and for many friendly and generous communications addressed to myself.

DAVID ESDAILE.

Manse of Rescobie, Forfar,
13th June, 1846.

POSTSCRIPT. *19th June.* — To-day I have had a new proof of the value of Mesmerism in relieving the sick. I was visiting Isabel A——, a young woman recovering from fever; the fever had left her, but the second night before I saw her an attack of inflammation in the breast had rendered necessary the application of leeches. I found her in pain from the inflammation, and also from toothache, and complaining of inability to sleep. In ten minutes I threw her into the mesmeric trance; this was at 9 P. M.: she awoke at 2 A. M., refreshed and hungry. 23rd. — The change of weather has injured my relative Mrs. C. This evening she had a dreadful cough, which banished sleep, and gave her much pain. I proceeded to mesmerise her in the usual way: the paroxysms of the cough rendered the process more laborious than formerly; at last I succeeded in allaying the spasmodic motions of the thorax, by placing my fingers on her throat, and breathing continuously on the spot which appeared to be the seat of the irritation which annoyed her. In half an hour she was fast asleep; she slept two hours, and awoke refreshed. The cough had left her, and has not returned at this date (25th June). These are facts; and I record them for the benefit of the suffering. Let sceptics scoff, and doctors talk of danger: I have alleviated pain; and any one who will honestly make the attempt may do the same. — D. E.

MESMERIC FACTS

REPORTED BY JAMES ESDAILE, M.D.

To the Editor of The Englishman.

Sir,—Before proceeding to join the army, I have the pleasure to send you a "résumé" of my mesmeric practice during the last eight months.

My experience has demonstrated the singular and beneficial influence exerted by Mesmerism over the constitution of the Natives of Bengal, and that *painless* surgical operations, with other advantages, are their natural birthright, of which they will no longer be deprived, I hope.

Duty calls me to another and more extensive field, where I hope to work out this curious and interesting subject in all its practical details, and to ascertain to what extent other varieties of mankind are capable of being benefited by this natural curative power.

I am, your obedient servant,

James Esdaile, M. D.

Hooghly, 22d Jan., 1846.

A Return showing the Number of painless Surgical Operations performed at Hooghly, during the last eight months.

Arm amputated	1
Breast ditto	1
Tumor extracted from the upper jaw	1
Scirrhus testium extirpated	2
Penis amputated	2
Contracted knees straightened	3
Ditto arms	3
Operations for cataract	3
Large tumour in the groin cut off	1
Operations for Hydrocele	7
Ditto Dropsy	2
Actual Cautery applied to a sore	1
Muriatic acid ditto	2
Unhealthy sores pared down	7
Abscesses opened	5
Sinus, six inches long, laid open	1
Heel flayed	1
End of thumb cut off	1
Teeth extracted	3
Gum cut away	1
Prepuce cut off	3
Piles ditto	1
Great toe nails cut out by the roots	5
Seton introduced from ankle to knee	1
Large tumour on leg removed	1
Scrotal tumours, weighing from 8lb. to 80 lb., removed 17, painless	14
Operations	73

A Return of Medical Cases cured by Mesmerism, during the last eight months.

Nervous Headach - -	3 cured by one trance.
Tic-doloureux - -	1 ditto.
Nervousness, and Lameness from Rheumatism of $2\frac{1}{2}$ years standing - - -	1 by chronic treatment.*
Spasmodic Colic - -	1 by one trance.
Acute inflammation of the eye - - - -	1 by repeated trances in 24 hours.
Chronic ditto - - -	1 by chronic treatment.
Acute inflammation of testes -	1 by repeated trances in 36 hours.
Convulsions - - -	1 by one trance.
Lameness from Rheumatism -	2 by chronic treatment.
Lumbago - - -	1 by general and local mesmerising for a week.
Sciatica - - - -	1 ditto.
Pain in crural nerve - -	1 ditto.
Palsy of one arm - -	1 ditto for a month.
Ditto of half the body -	1 ditto for 6 weeks.
Feeling of insects crawling over the body - -	1 by one trance.
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It will be perceived that the above cases are chiefly diseases of the nervous system. But as sleep and the absence of pain is the best condition of the body for promoting the resolution of inflammation by the powers of Nature, I have extinguished local inflammations by keeping the patients entranced till this was effected.

* By chronic treatment is meant daily mesmerising without the intention of entrancing the patient, which is not necessary.

I beg to state, for the satisfaction of those who have not yet a practical knowledge of the subject, that I have seen no bad consequences whatever arise from persons being operated on when in the mesmeric trance. Cases have occurred in which no pain has been felt subsequent to the operation even; the wounds healing in a few days by the first intention; and in the rest, I have seen no indications of any injury being done to the constitution. On the contrary, it appears to me to have been saved, and that less constitutional disturbance has followed than under ordinary circumstances.

There has not been a death among the cases operated on. In my early operations, I availed myself of the first fit of insensibility, not knowing whether I could command it back again at pleasure.

But if the trance is not profound the first time, the surgeon may safely calculate on its being deeper the next, and when operating in public, it will be prudent to take the security of one or two preliminary trances. Flexibility of the limbs till moved, and their remaining rigid in any position we put them in, are characteristic of the trance: but there are exceptions, and these are equally diagnostic, and to be depended upon. It sometimes happens, that the limbs become rigid as they lie, and on bending them they have always a disposition to return to a state of spasmodic extension. At other times, there is a complete relaxation of the whole muscular system, and the limbs can be tossed about like those of a person just dead.

The eyes are usually closed, but the eyelids are sometimes seen a little separated, or half-open and tremulous, and the eye is even occasionally wide open, fixed, and insensible to the light. On one occasion, having ordered a man to be entranced, I returned after two hours, and was told by my assistant that the man was not affected. I went to see, and found him with half-open eyes, quivering eyelids, and

trembling hands. I immediately said that he was ready, and, without further testing his condition, performed a most severe operation upon him, without his knowing any thing about it.

I also wish to remark that I have seen no symptom of congestion of blood on the brain; the circulation in the trance being usually quite natural, like that of a sleeping person. My patients appear to escape the stimulating stage of the mesmeric influence altogether, and to pass at once from life to temporary death. This I am disposed to attribute to the concentrated uninterrupted manner in which the power is applied. As soon as it is felt, there is no time given to the system to rally from the first impression, and it succumbs without a struggle to the constraining power.

Some patients, when suddenly awakened, say that their vision is hazy, and their heads light; but I take this to arise from the imperfectly recovered sensibility of the brain and the organs of sense, which are not at once roused up into the full possession of their waking powers, just as is seen in persons suddenly aroused from profound natural sleep.

That the mesmeric torpor of the brain and nerves does not arise from sanguine congestion, is often beautifully seen in the first actions of persons awaking from the trance.

They open their eyes, and at the same moment recover all their faculties; but it is seen that the pupil is insensible to the light: this they also become aware of; they know that their eyes are open, and that they ought to see, but do not. The thought fills them with horror, and with a fearful cry they bury their faces in their hands, like persons struck blind by lightning;' but this soon passes off, and the retina recovers its sensibility by a little rubbing of the eye. The dreadful shock given to the mind under such circumstances, or when a somnambulist awakes and finds himself standing in some strange attitude naked, in the midst of strangers

(an experiment I have often made), is a trial of the nerves which it would be very imprudent, and even dangerous, to make with any but such singularly impassive subjects as my patients.

This, and the inconveniences of inducing the *mesmeric disease* (spontaneous mesmeric action in the system) by doing more than is necessary for the cure of disease, appear to me to be the real dangers to be avoided in the use of Mesmerism as a remedy.

I am now able to say from experience, that debility of the nervous system predisposes to the easy reception of the mesmeric influence, and I augur well of a patient's powers of submission, when I recognise in him the listless dejected air, "*l'air abattu*," that usually accompanies functional debility of the nerves.

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MESMERISM IN INDIA.

CHAPTER I.

Aversion of the old Schools and the Public to new Ideas. — Some old Notions must be suspended in fairly considering Mesmerism. — Irrational Incredulity. — Mesmerism to be tried by the usual Laws of Evidence. — Medical Men not entitled to decide the Matter for the Public. — The Public invited to judge of the Matter of Fact. — Medical Men in this Country favourably placed. — Personal Labour necessary. — All easy afterwards. — Qualifications of a Mesmeriser. — The Mesmeric Power very general. — The Sick the proper Subjects for Experiment. — The Natives of Bengal very susceptible of the Mesmeric Influence. — Nature the School of the true Physician. — Mesmerism a natural Power of Man. — Instincts of Animals. — Mesmerism known and practised in India. — Trial of Skill with an Eastern Magician. — Dangers of Mesmerism no Reason for rejecting it. — No need to interfere with the Mind in Bodily Disease. My Patients bad Subjects for the Mental Phenomena. — The Public invited to judge the Question practically and fairly.

On the first broaching of any new branch of knowledge, there is ever a great commotion and combination among the old-established schools,

which have thriven on the wisdom of their ancestors, and desire nothing more than "*stare super vias antiquas*," satisfied with things as they are, and content to "let well alone;" and there is also a general dislike in society to have its mind unsettled, and to be called upon to think again about matters supposed to have been set at rest long ago. We have the same affection for old familiar ideas that we entertain for old coats, shoes, and hats, because they humour the peculiarities of our constitutions.

But I hope the time has at last come for the public, and the medical profession, to listen patiently to a medical man, while he relates facts that have fallen under his observation regarding Mesmerism, and for the truth of which he pledges his private and professional character, as I hereby do.

Under such circumstances, a writer has a right to expect that his statements shall be believed till they are disproved, or till dishonesty in any of the parties concerned shall be detected.

In considering a subject so new and wonderful, it will be necessary to clear away many thorns and thistles which have grown up in the mental soil, exhausting its strength, and unfitting it for receiving the seeds of truth, however freely and

carefully sown. At present it will be sufficient, if, as a preliminary, the reader will dismiss the respectable old notion, that the vital powers of our bodies are confined within their own limits, and cannot be transferred to and act upon others. On the contrary, there is good reason to believe that the vital fluid of one person can be poured into the system of another, upon which it has various effects, according to constitutional peculiarities, the demand for it as a remedy, and the manner and extent to which it is exhibited in order to answer different purposes. Man is not, as commonly supposed, shut up in that pent-house, his body, isolated, and impotent to affect his fellow-creatures beneficially by a benevolent will, and his own innate resources. A merciful God has ingrafted a communicable, life-giving, curative power in the human body, in order that when two individuals are found together, deprived of the aids of art, the one in health may often be able to soothe and relieve his sick companion, by imparting to him a portion of his vitality. To believe that we possess such a power is, surely, a proud and exalting idea, which I hope the public will entertain with pleasure; and I trust to be able to prove to the satisfaction of all dispassionate and reflecting minds, that this is no fond delusion of

an excited brain, but a substantial blessing, daily at work for good, extending immeasurably man's individual power of doing good by his unaided natural powers, and bringing healing and comfort to suffering humanity, all over the world.

Such is the force of habit, and aversion to a new train of thought, that this proposed extension of man's power has been received with as much distaste, as if it had been intended to deprive him of a limb, or one of his senses, and has been subjected to an irrational incredulity which nothing can satisfy. Nothing is more common than to hear persons boast, "that they will not believe it till they see it;"—some go a step farther in smothering their reason, and declare, that "they would not believe it, if they saw it;"—and I have known others, not only refuse the evidence of their senses, but deny their own deeds, because they had declared the thing to be "impossible!" It is a common and ludicrous error to see people mistaking obstinacy for strength of mind, and self-sufficiency for knowledge; and aiding the delusion, by calling themselves "Sceptics," that name having once been respectable in philosophy; —whereas, they have never had any doubt about the matter, and will never condescend to hear the subject mentioned without emphatic expressions

of contempt and disgust. These are the "*enfans perdus*" of knowledge, and must be left to the free indulgence of their passions and prejudices; for a man who never doubts, will never learn: he may grow older, but not wiser.

Few, in the solution of their doubts, can be privileged to the extent of St. Thomas; and the horizon of human knowledge would be miserably circumscribed, if we rejected all that we did not understand, and refused to believe facts, except on the evidence of our own senses. There is absolutely no merit in believing what we have seen and handled; this is no exercise of the judgment, and is level to the understanding of a savage: but it is the privilege of reason to be able to believe in the most surprising statements of others, if properly supported by evidence, and to adopt their conclusions, although the facts may have been observed, and the deductions drawn, by our antipodes. One such rational conversion is worth a thousand produced by crediting the senses; for its influence extends to reasoning minds all over the world. When a person says, "I would not have believed it, unless I had seen it," he must not be surprised at his neighbour requiring equal satisfaction. As a lover of truth for its own sake, I am very little gratified by

being told by my friends, "I believe it, because *you* say so." This is a very barren belief, and reaches only a small circle; our faith and opinions should be built upon a broader basis than personal confidence in any one. There are recognised laws of evidence for testing the credibility of human testimony, upon whatever subject it may be given; and however new or strange the proposition may be, we shall, by a careful and dispassionate examination of the proofs, be able to determine what we may safely believe, on what points we ought to suspend our judgments, and how much should be rejected. In spiritual matters, we have been told, "Blessed are they that have not seen, and yet have believed." This blessing also follows the ready, but discriminating, reception of truth in philosophy, morals, and secular affairs. Mental satisfaction, honour, and profit, if cared for, reward the first discoverers of the secrets of nature; riches await the men of clear sense, who know how to turn the new truths to practical purposes; and in medicine, the early application of new remedies removes much human suffering that would probably have been otherwise hopeless. It is a curious psychological phenomenon, that a hard disbelief in Mesmerism seems to be in proportion to the

extraordinary facilities afforded to every one of satisfying himself by his own deeds, and the evidence of his own senses. No "*hocus pocus*," no pretensions to exclusive powers, no attempts at concealment, are resorted to by many Mesmerisers, whose word has never been doubted, and who are well known to be neither fools nor knaves. They say to us, "Do thus, and you will probably become as wise as ourselves; or if you cannot, or will not, be at the necessary trouble, — come and see."

But people in general prefer to dictate laws to nature from their easy chairs, and amuse themselves at the expense of her followers, chasing the shapes of their own imaginations, as they are pleased to say. To those who really desire to know the truth, whatever favourite ideas it may upset, I would venture to recommend that they should examine the evidence in support of Mesmerism, just as they would any other matter worth inquiring about; and I can confidently promise that they will be richly rewarded. To encourage them, I would remind them in the words of Bacon, "that the inquiry of truth, which is the love-making or wooing of it; the knowledge of truth, which is the presence of it; and the belief of truth, which is the en-

joying of it; is the sovereign good of human nature;" and that this highest gratification of humanity can only be attained by carefully training and exercising our intellect, to which the senses are only handmaids.

The public are too apt to consider the subject of Mesmerism as a professional one, and not to take the necessary means to become acquainted with it till the doctors shall have decided what is to be believed about it. This is an error on the part of the public, for, I am sorry to say, medical men in general as yet know nothing about it; and there is nothing in their previous knowledge, however great and varied, that bears upon the subject, or can entitle them to decide, *ex cathedrâ*, on the truth or falsehood of the new discoveries. As the question at present stands, it is one of *facts*, and of evidence in support of them, of which a jury of sensible unprofessional men can judge as well as so many doctors, to whom the subject is equally new and perplexing. When the doctors shall have experimented for themselves, or taken the trouble to witness the practice of others, and carefully studied the subject, the public cannot do better than take them for their guides; but this "consummation devoutly to be wished" is so remote, I fear, that

not many of this generation will live to benefit by Mesmerism, if they wait till it is admitted into the Pharmacopœia.

I would therefore recommend the public to exercise their common sense, and sober judgment, in determining for the doctors the matter of fact; and if the community decides that it is really a remedy of great efficacy, that there is no resisting the proofs in support of it, that to know nothing about it is no recommendation to a medical man; then Mesmerism will assume its proper rank as a remedial agent, and be lodged in the hands of those who should alone practise it; for it is subject to enormous abuses in the hands of the ignorant and unprincipled. Instead of doubting and dogmatising about Mesmerism, I would earnestly entreat my medical brethren to put it to the test by personal experiment, for it is a thing to be *done*, and not talked of only: "I want *facts*, and not *words*," will be the answer of every person of common sense to the most dogmatical and ingenious objectors.

It is by medical men in this country taking up the subject experimentally, without previous knowledge of it, and having no theories to make good or defend, that the truth or falsehood of Mesmerism may be very speedily decided. By

following the instructions to be hereafter given, I doubt not that many will be as successful as myself, for they are the means of putting in motion a law of nature whose springs are hidden from us, but whose effects are most wonderful, and beneficial to humanity, when properly directed.

But I beg leave to warn all who have not yet a practical knowledge of the subject, that to produce the phenomena of Mesmerism is by no means a thing so light and easy as some imagine. In singularly sensitive persons the extreme degree of coma, so intense as to permit the performance of surgical operations, without awaking the patient, may sometimes be obtained in a few minutes; but, in general, it takes an hour or two, and the process often does not succeed till the second, or even fourteenth time. In this, as in every thing else, nature will not "unsought be won," and only yields her secret treasures to those who court her with earnestness, sincerity, and resolution. "*Labore et sudore*" ought to be the Mesmerist's motto, until he has produced the desired results by his personal efforts, and thereby given confidence to himself and others. After this, all is easy, for any number of proper assistants may be taught to act under our superintendence; and this

is the only way in which a physician can practise Mesmerism to any extent.

But I would venture to suggest, that it will not be enough to set people to mesmerise for us by the book. It is exacting too much of human nature to expect people to sweat for hours pawing the air, &c. for our incomprehensible objects. But let them look on and see the wonderful effects produced by the labours of their superiors; and a host of willing and efficient Mesmerisers will spring up, to execute the will of the directing mind, and relieve it from the drudgery of the needful bodily exertions. Much has been written about the physical and moral qualities necessary in a Mesmeriser, and such a picture of a "perfect monster" has been drawn, that it is enough to deter one from making the attempt. If asked to select a natural Mesmeriser, I should be disposed to choose a person of a high organisation, in whom the nervous and circulating systems were equally active, with a determined will, a resolution to do the thing if possible, and a love of truth and humanity, that would induce him to "do for love what gold could never buy." But, when the way has been shown, far less energy of mind and body is quite sufficient for all practical purposes. Healthy young persons, who are tractable and

patient, and who will give the necessary degree of attention, can be made to work out our intentions in the most efficient manner; and I hope to make it appear that the mesmeric power is a far more general gift of nature than has hitherto been supposed. Finding it impossible, after the first month, to prosecute the subject in my own person, owing to the great bodily and mental fatigue it caused,—for I spared neither,—I set to work my hospital attendants, young Hindoos and Mahomedans; and such has been my success, that every one I have taught has become a skilful Mesmeriser. Now I do not need to mesmerise at all, having a dozen assistants to execute my wishes, whether it be in the mesmeric treatment of medical cases, or for procuring coma in surgical operations.

To those who, by their own powers, may desire to test the truth for themselves, I would venture to suggest, that an earnest desire to know the truth, a fixed attention, and a resolution to overcome first difficulties, are essential conditions of mind for the operator, as the means of concentrating and keeping up the continued action of the vital agent, whatever it may be. First experiments should be made on the sick, in the hope of benefiting them; which hopes, if strongly

felt, will be a stimulus to exertion, and an element of success totally wanting in experimenting on healthy subjects, who are also more difficult to be affected. "The whole need not a physician, but they that are sick;" and however bountiful nature may be to her creatures, she is never prodigal, and never wastes unnecessary power. Mesmerism is the "Medicine of Nature;" and she refuses, very wisely, to take it when it is not needed; and if forced upon her in a state of health, it is very likely to do mischief; for any attempt to be better than "well" is pretty sure to make one ill. People say to me, "I would like to ascertain if I can be mesmerised; do try." I reply, "You very probably cannot; and I should as soon comply with your desire to feel the effects of opium, as mesmerise you without a cause; when you need it, you will probably be benefited by it." Besides, a person in health resisting the influence is no proof that he will remain insensible to it in an altered state of the body, when there may be an actual craving of the nervous system for this sustenance from without.

As yet, I am sorry to add, I cannot, with any degree of confidence, say who are the persons susceptible of the mesmeric influence, without first trying. But it is satisfactory to know, that

by far the majority of persons acted upon by me, and my assistants, have been affected in different degrees, all of which are invaluable to their possessors, for the relief and cure of their diseases; and in most of the failures I have little doubt that we should have succeeded, if the process had been prosecuted.

The people of this part of the world seem to be peculiarly sensitive to the mesmeric power; and as it has been observed that a depressed state of the nervous system favours its reception, we can understand why they, as a body, should be more easily affected than Europeans. Taking the population of Bengal generally, they are a feeble, ill-nourished race, remarkably deficient in nervous energy; and natural debility of constitution being still further lowered by disease, will probably account for their being so readily subdued by the Mesmerist. Their mental constitution also favours us: we have none of the morbid irritability of nerves, and the mental impatience of the civilised man, to contend against; both of which resist and neutralise the efforts of nature. The success I have met with is mainly to be attributed, I believe, to my patients being the simple, unsophisticated children of nature; neither thinking, questioning, nor remonstrating, but

passively submitting to my pleasure, without in the smallest degree understanding my object or intentions. How far artificial man may have forfeited his birthright I have not yet had the means of knowing; but out of the small number of Europeans who have come under my observation, the majority have also succumbed to the influence; and if the proud sons of civilisation will condescend to return for a moment to the feet of their mother Nature, they also will probably benefit by her bounties. We have so far deserted Nature, that, in return, she has renounced us as unnatural children, and left us to our self-sufficiency and artificial resources; but these, in general, are mere make-shifts and palliatives, compared with the steady and enduring curative powers of nature, when properly understood and brought into action. The whole art of the true physician is exerted to induce nature to interfere and take up the case of his patient; and when he sees signs of her gracious presence, he only reverentially looks on, and confines himself to removing impediments in her way. But the routine practitioner will rarely condescend to divide with nature the merit of the cure. He and his pills, powders, and potions, must have all the credit; and if any one pretends to be able sometimes

to cure disease by the unassisted powers of nature, he is called quack, impostor, or fool, and hunted down as a *fera naturæ*. But, in my estimation, the genuine medical quack is he who, professing to cure disease, yet allows his patients to suffer and perish, by ignorantly, or presumptuously, despising any promising or possible means of relief. The Father of Medicine thought very differently from his degenerate sons, for he says,—"Nothing should be omitted in an art which interests the whole world, which may be beneficial to suffering humanity, and which does not risk human life and comfort." But a time was, when apothecaries, chemists, and diploma'd physicians did not exist; when man was an unreasoning animal, devoid of all the resources of art, yet subject to all the ills that natural flesh is heir to; and it is a subject of deep interest to the philosopher and the physician to ascertain what were his natural remedies, in common with the other animals; whether his instincts were as strong as theirs, and to what conservative powers he resorted when labouring under disease. That he possessed such appears to me to be extremely probable, from the analogies of the animal creation, and the universal benevolence of the Deity to his creatures. It must be most important and

instructive to discover what *were*, or, if not yet known, what *are*, the natural remedies of man; for by observing their effects we shall best understand the restorative processes of Nature, and be able to imitate them by art, with a certainty hitherto unattained by medicine.

So far from Mesmerism being a new and unnatural art, there is every reason to believe that it is the oldest and most natural mode of curing many of the severe, uncomplicated diseases of the human race. Let us imagine, for a moment, the condition of savage men, before, by long experience, they had learned to avail themselves of the medicinal virtues of the vegetable and mineral kingdoms, for the cure of their most pressing diseases. Man, in this state, would be more helpless than the brute creation; they have happy instincts, many of them known to us, by which they are directed not only to their natural food, but to their natural medicines. But man, so far as we yet know him, could in his sufferings only make vague experiments on the natural objects around him, in the desperate hope of stumbling upon some suitable remedy. This might occasionally happen, but he was more likely to be poisoned than cured by his first experiments. The very fish were more favoured than he. The

salmon, by an infallible instinct, quit the sea at a certain season, and ascend the rivers, thereby getting rid of their tormentors, the sea-lice (which the fresh water speedily kills), and at the same time reaching the spots destined for the propagation of their kind. After depositing the spawn, the parent fish, black, lank, and sick, distasteful to themselves, and unwholesome to us, hasten to the sea to renovate their health; whence, again, they issue in another year, increased in size, and brilliant as silver, to run the same course as long as life continues. The young fry, also, the moment they break the egg, turn their heads seaward, and never stop till they reach the ocean, whose action is necessary for their growth and health.

The dog eats grass, and licks his sores when sick; the cow, and calf even, sham dead, to induce the crows to pick the vermin from about their eyes and ears; the chick, as soon as it breaks the shell, pecks gravel, to aid digestion; the mongoose, after being bitten by its enemy, the snake, retires to the fields, to seek its antidote against the poison; and this it finds, for it comes back quite well; and at certain seasons the wild animals resort, from the most distant parts of the country, to the "salt-licks," to renovate their

constitutions. Numberless instances of the same kind will occur to the naturalist, and the humble observer of nature even; and is it imaginable that the ever-watchful, all-bountiful Providence of God should have left the "noble savage," alone of all His creatures, to run such cruel risks, and perish helplessly in his natural ignorance? Reasoning *à priori*, we should say not; and our positive knowledge of the equal care bestowed by God on all his creatures, forbids the supposition. Man, then, had probably some instinct by which he was directed to a natural medicine of sovereign virtue, and by which the hunter and his family were saved from starvation, when disease, for a time, deprived his right hand of its cunning, unnerved his iron sinews, and bowed his gallant head. If this be a natural supposition, what could be his resource if not Mesmerism — that inherent power, implanted, as I conceive, in the human being, for the solace of his suffering fellow creature? This is the simplest and most speedy restorative of the powers of life, in cases adapted to it (for, like every natural agent, it has its conditions and limits); and men in pain have an instinctive tendency to perform the required processes. From its simplicity, how consonant with

all we know of the laws of nature would be such a power, and how admirably adapted to meet the exigencies of savage life!

The more observing among savage men, it is presumable, would soon detect the latent curative powers of their bodily system, and develope them into an art for the cure of disease, and the advancement of their own interests. But when experience had given them skill, and it became a source of gain, they made, we may suppose, a mystery of their calling, and attempted to secure the lucrative secret for themselves and families. Hence, among the savage races of mankind, we see the healing art practised exclusively by conjurors, either artfully concealing the secret of their power by incantations, and other mummery, or, possibly, themselves deceived into a belief of the efficacy of such accompaniments. If the Mumbo Jumbo men of Africa, the medicine men of America, and the charmers of this country, ever succeed in relieving their patients (and here they do), I am disposed to think that it is generally in cases curable by Mesmerism. The following extract from my "Mesmeric Journal" will show that this is not so fanciful a speculation as it may at first appear, and that Mesmerism is actually practised in this country, and has pro-

bably been so time immemorial, like every other custom in this immutable society.

June 9th, 1845.—I had to-day the honour of being introduced to one of the most famous magicians in Bengal, who enjoys a high reputation for his successful treatment of hysteria, and had been sent for to prescribe for my patient (whose case will be afterwards given), but came too late; the success of my charm, Mesmerism, having left him nothing to do. Baboo Essanchunder Ghosaul, deputy magistrate of Hooghly, at my request introduced me to him as a brother magician, who had studied the art of magic in different parts of the world, but particularly in Egypt, where I had learned the secrets of the great Sooleymann, from the moollahs and fuqueers, and that I had a great desire to ascertain whether our charms were the same, as the hakeems of Europe held the wise men of the East in high estimation, knowing that all knowledge had come from that quarter. I proposed that we should show each other our respective charms, and, after much persuasion, he agreed to show me his process for assuaging pain. He sent for a brass pot, containing water, and a twig with two or three leaves upon it, and commenced muttering his charms, at arm's length from the patient. In a short time he dipped his

fore-finger into the water, and, with the help of his thumb, flirted it into the patient's face; he then took the leaves, and commenced stroking the person from the crown of the head to the toes, with a slow drawing motion. The knuckles almost touched the body, and he said that he would continue the process for an hour, or longer, if necessary; and it convinced me that, if these charmers ever do good by such means, it is by the Mesmeric influence, probably unknown to themselves. I said that I was convinced of the great efficacy of his charm, and would now show him mine; but that he would understand it better if performed on his own person. After some difficulty, we got him to lie down, and, to give due solemnity to my proceedings, I chaunted, as an invocation, the chorus of the "King of the Cannibal Islands!" I desired him to shut his eyes, and he clenched his eyelids firmly, that I might find no entrance to the brain by that inlet. In a quarter of an hour he jumped up, and said he felt something disagreeable coming over him, and wished to make his escape. He was over-persuaded to lie down again, however, and I soon saw the muscles around the eye begin to relax, and his face became perfectly smooth and calm. I was sure that I had caught my brother-magician

napping, but, in a few minutes, he bolted up suddenly, clapped his hands to his head, cried he felt drunk, and nothing could induce him to lie down again; "*abiit, excessit, evasit, erupit!*" Next day I saw him, and said, "Well, you were too strong for my charm last night, I could not put you to sleep." "Oh! yes, Sahib," he answered, "you did; I allow it; it is allowed that you put me to sleep."

A gentleman, whose case will be given hereafter, immediately recognised the identity of the two processes, and told me that he had been Mesmerised, he now knew, in a different part of the country, and with much relief, in a painful affection of the leg. In addition to the traction with the leaves, his mesmeriser had breathed carefully upon the pained part, just as my assistant had done when mesmerising him locally for rheumatism. It thus appears that the beneficial effects of the Mesmeric processes are known in this country, and the secret has probably descended from remote antiquity, in certain families, or castes. Farther on, when speaking of Somnambulism, a curious history will be given, which leads me to suspect that they know the evil, as well as good, of Mesmerism, and practise it for the most villanous purposes. The possible evil resulting to

society from the practice of Mesmerism has been a favourite objection, even when the evidence of its existence and power could be no longer resisted.

But the tendency of all power depends upon the direction given to it for good, or evil; and to eject opium, mercury, and prussic acid from the pharmacopœia, because, when injudiciously administered, they poison, instead of curing our patients; or to reject the agency of steam for the purposes of life, because it sometimes takes us a longer journey than we intended; would be as reasonable as to refuse to be cured by Mesmerism, because it could also injure us, if ignorantly and injudiciously applied. That this agent may, and will, be turned to the most diabolical purposes, is most certain, if the public will not be at the trouble to think upon the subject, and defend itself by common sense precautions. But the power as it comes from the Creator is pure, and the perversion of it is the work of the creature. The object of man's life here clearly is — to separate the good from the evil; "to prove all things, and hold fast that which is good;" and this can be done in Mesmerism, as in anything else: the abuse, and not the use of any great power, is to be dreaded and guarded against. I have great

hopes that my experiments will go far to separate the regions of mind and body, which, it seems to me, have been unnecessarily and perplexingly intermingled by former Mesmeric observers; and this will not only simplify the Mesmeric treatment of disease, but remove the principal objection to it; namely—the necessity of acting on the mind, often injuriously, during the cure of a bodily infirmity. It will appear, that in the exercise of the art, as a medical agent of the most benign as well as powerful nature, the mind has never been attempted to be influenced by me, nor has it ever been heard of in my practice. In subjecting my patients to the sanative influence of Mesmerism for bodily complaints, no mental *rapport* has ever been thought of; and if so much can be done without it, I am sanguine that it will soon be proved to be a tedious and unnecessary complication of the art, and "more honoured in the breach than the observance." In the management of mental disease, it will probably be required, and be useful, as the mind depends much more upon organisation than is generally supposed. But this is only an extension of the blessing, if the power is wielded in all honour and simplicity of purpose. In this, as in other matters, the danger lies in the company we keep.

The possessor of a well-filled purse does not seek the companionship of pick-pockets; and the honest man eschews the society of knaves; and if Mesmerism is thought likely to benefit us, the same common-sense mode of proceeding should influence us in the disposal of our bodies and minds, when affected by disease. I am convinced that in the majority of bodily evils removable by this means, there will be no need to interfere with the mind at all. To do so is a mere travelling out of the record; and where a mixed treatment is required it can be safely adopted, by using the simple precaution of seeking an honest man with the necessary knowledge of the subject; and let us hope that such will soon abound. Many will be disappointed that I have no mental wonders to relate; but no inference against the existence of such wonders can be fairly drawn from the silence of my patients. My researches have been purely physical, and preclude me from getting at the mind at all, for all activity of mind is the natural enemy of the purely physical impressions made upon the system: I therefore seclude the brain from all external impressions as rapidly as possible; the object being to extinguish bodily and mental sensibility together, and altogether; and in proportion to our success

in effecting this, is the early inducement of Coma for surgical purposes. It is quite unreasonable to expect to extract music from a fiddle without strings: and I endeavour to break at a blow, as it were, all the strings of the mind—the five senses. It is true, that this treatment is only required for acute diseases, or to induce insensibility to pain, and it might be expected that in the treatment of chronic diseases, I should be able to elicit the mental phenomena, if they exist in nature. But as my principal object is to ascertain how far this new agent is capable of alleviating bodily suffering, I have purposely kept myself from embarking on the troubled sea of metaphysics, till the more pressing bodily problem shall be solved, and a "terra firma" of indisputable facts created, from whence we may securely, and at leisure, examine, and attempt to understand, the high and mysterious objects above us.

My patients, being the poorest and most ignorant of the people, and convicted felons from the same degraded orders, are the most unfavourable subjects for psychological experiments. As to *physique*, men are nearly the same all the world over: an universal vital law reduces all to the same level of animal, and the cooly, therefore, may be able to mesmerise the philosopher; but

the difference in *morale* is so great, not only among races, but individuals, as to preclude all sympathy, and to often amount to actual antipathy, and mutual repulsion. Although in producing the physical effects of Mesmerism, I have not seen any necessity for the sympathy and *rapport* we read so much about, I can readily understand, that in eliciting the higher mental phenomena, these fine mental sympathies may be developed, and be necessary for the success of the abnormal mental manifestations; but my patients and I have probably too little in common to admit of mental sympathy between us. It will be seen, however, in the chapter on Somnambulism, that I have created a singular *bouleversement* in the minds of coolies and pariahs even, when under the Mesmeric influence.

The public, in examining a subject so deeply interesting to them, will, I hope, take an enlarged and liberal view of the matter, and look for fundamental and incontrovertible truths, which are practically important, and not allow themselves to be cheated out of their senses and judgment, by the doubtful, mysterious, and theoretical parts of the subject being exclusively dwelt upon, by those who *wish* Mesmerism to be untrue, or by others who have neither the desire

nor capacity to acquire new knowledge. Errors of observation and of judgment must often occur in investigating a new and difficult subject, but I hope such unintentional mistakes will be excused; and wherever they shall be pointed out in my observations, I shall be ready to acknowledge and correct them. Let all doubtful evidence be totally rejected, and a mass of substantial important truth will remain, which, I am confident, the public "will not willingly let die;" for human nature can ill afford to lose any new and promising source of comfort to suffering humanity.

Before concluding these prefatory remarks, I beg the reader not to do me the injustice to think me a Mesmeric doctor, for it would be as true to call me a rhubarb, jalap, or castor-oil physician. Mesmerism often comes to the aid of my patients, when all the resources of medicine are exhausted, and all the drugs of Arabia useless; and therefore, I consider it to be my duty to benefit them by it, and to assist in making it known for the advantage of mankind.

CHAP. II.

The French Commission of 1779. — *Both Right and Wrong.* — *The Mesmerists properly punished.* — *Condition required in the Patient.* — *State of my Mind before experimenting for myself.* — *Report of the Bishop of Lausanne to the Pope.* — *His Reply.* — *Accidental Nature of my First Experiment.* — *Accidental Nature of my Second Experiment.* — *First Mesmeric Surgical Operation.* — *Conclusion.*

THE most formidable, because the most reasonable argument against the existence of Mesmerism as a natural power, is, perhaps, the report of the French Commission in 1779, of which Franklin was president. The verdict of the *Savans* was fair enough, considering the nature of the evidence placed before them; but yet, (such is human fallibility), in this case *summum jus* was also *summa injuria*; truth was sacrificed to falsehood, as I think will clearly appear from a short analysis of their proceedings. This will probably not be time wasted, as I have heard intelligent gentlemen say, that the report of the French philosophers still decided their opinions. They had a series of axioms in Mesmerism presented to them, whose truth they were to

examine, and the efficacy of certain processes was to be proved to their satisfaction by experiment.

The Mesmerist's object seems to have been, to try to convince the commission that he had a secret worth knowing, and yet continue to keep it to himself, by hiding its extreme simplicity under a load of complicated machinery and various kinds of mummery. D'Eslon, the pupil of Mesmer, propounded his laws of animal magnetism, after this fashion:—

"I. Animal magnetism is an universal fluid, constituting an absolute plenum in nature, and the medium of all mutual influence between the celestial bodies, and betwixt the earth and animal bodies."

This is only a gigantic assertion.

"II. It is the most subtile fluid in nature, capable of flux, and of reflux, and of receiving, propagating, and continuing all kinds of motion."

The first two clauses are probable enough; the last is only rash dogmatism.

"III. The animal body is subjected to the influences of this fluid by means of the nerves, which are immediately affected by it."

We see no other way, at present.

"IV. The human body has poles, and other properties, analogous to the magnet."

The first proposition has never been proved, and takes everything for granted; there is only likelihood in the second.

"V. The action and virtue of animal magnetism may be communicated from one body to another, whether animate or inanimate."

True, as regards the relations between a imate bodies; and these can also impregnate inanimate substances.

"VI. It operates at a great distance, without the intervention of any body."

True.

"VII. It is increased and reflected by mirrors, communicated, propagated, and increased by sound, and may be accumulated, concentrated, and transported."

Soothing sounds may possibly assist in lulling the brain, but quiet is far more essential; the other assertions are borne out by modern experience.

"VIII. Notwithstanding the universality of this fluid, all animal bodies are not affected by it; on the other hand there are some, though but few in number, the presence of which destroys all the effects of animal magnetism."

The first part correct, the last not improbable.

"IX. By means of this fluid, nervous diseases

are cured immediately, and others mediately; and its virtues, in fact, extend to the universal cure and preservation of mankind."

True; to so great a degree, that we do not yet know how far it may go.

Is it surprising that the Commission dismissed contemptuously such a mass of sheer assertion and unsupported theory, seasoned with truth to be sure, but that so diluted and obscured as not to be recognisable? Like a Bengal witness, D'Eslon was not content to tell the truth simply, but added so many corroborating inventions of his own, that no one knew what to believe, and the case was dismissed as unworthy of farther investigation. He ruined himself, and his cause, also, (perhaps in ignorance, however,) by loading the truth with a parcel of trumpery machinery, through which he hoped the power of nature would nevertheless penetrate. But Nature, like an overloaded camel, turned upon her driver, and threw him and his paraphernalia of magnetic platforms, conducting-rods and ropes, pianos, magnetised trees and buckets, into the dirt; and truth retired in disgust to the bottom of her well, there to dwell till more honest men should draw her forth again to surprise and benefit the world.

As far as my observation goes, all that is ne-

cessary for success, if the parties are in the relation of agent and subject, is *passive obedience* in the patient, and a sustained attention and patience on the part of the operator. The process being a natural one, the more the parties are *in a state of nature* the better: the bodies of my patients being naked, and their heads generally shaved, is probably of no small consequence in the proceedings.

Before presenting to the reader my first experiment in mesmerising, I may perhaps be excused the egotism of giving a brief sketch of the history of my belief in Mesmerism, as it is a remarkable epoch in a man's life the day he discovers that he possesses the temporary power of life and death over his fellow-creatures.

Ever since Dr. Elliotson declared, years ago, that he "should despise himself if he did not declare his conviction of the truth of Mesmerism," I ceased to regard it lightly, and paid attention to all well-attested reports upon the subject. At last the facts became so numerous, and were so well supported by credible witnesses, and kept their ground so firmly, both against adverse reasoning and ridicule, that I felt compelled to surrender my belief in the existence of the Unknown Power, or cease to exercise my reason and judgment. Ten days

before making my first experiment, I thus wrote to a friend in England:—"What think you of this new mystery, Mesmerism? For my part, I am thinking seriously about it, and cannot help suspecting that we have hit upon one of Nature's great secrets. I keep myself perfectly neutral, and hear the *pro* and *con*. If it turns out to be a delusion, I shall be happy to assist in digging its grave."

The uniformity of the phenomena described by different persons, and coming from various parts of the world, strongly arrested my attention, and impressed me with the conviction that some new general law of Nature had been discovered. England, France, Germany, and America, all combined to give the same evidence in support of the new doctrines, or, rather, new phenomena of Nature. About the time that Miss Martineau's disclosures appeared, I also read a curious and striking document written in May, 1841, by the Archbishop of Lausanne and Geneva, and addressed to the Sacred Penitentiary, at Rome. As it may possibly make the impression upon others that it did on me, it is here transcribed.

"Most Eminent Lord,

Since that which has hitherto been answered respecting animal magnetism seems by

no means to suffice, and it is much to be wished that cases not unfrequently occurring may be solved more and more uniformly, the undersigned humbly lays before your Eminence that which follows:—

"A magnetised person, who is generally of the female sex, enters into that state of sleep called *Magnetic Somnambulism* so deeply, that not even the greatest noise at her ears, nor any violence of iron or fire, is capable of raising her from it. She is brought into this kind of ecstacy by the magnetiser alone, to whom she has given consent (for consent is necessary), either by various touches or gesticulations, when he is present, or by a simple command, and that, too, an internal one, when he is at a distance of even several leagues.

"Then, being interrogated, aloud or mentally, concerning her own disease, or those of absent persons entirely unknown to her, this person, who is evidently one unlearned, at once exhibits great superiority in science to medical men; announces most accurately anatomical matters; indicates the cause, seat, and nature of internal diseases in the human body, which, to the skilful, are most difficult of understanding, and unravels their progress, variation, and complications; and

this in the terms proper to them, and prescribes the most simple and efficacious remedies.

"If the person concerning whom the magnetised woman is consulted is present, the magnetiser establishes the relation between them by means of contact. If, however, he be absent, a lock of his hair supplies his place, and suffices; for, when this lock of hair is brought into the proximity only of the hand of the magnetised person, he declares what it is (without casting his eyes on it), whose hair it is, where the person is actually sojourning, to whom the hair belongs, what he is doing, and affords the above-mentioned information respecting his disease not otherwise than if, after the manner of medical men, he were inspecting the interior of his body.

"Lastly, the magnetised person does not see with the eye. The eyes being covered, though not knowing how to read, he will read off whatever is placed on his head or stomach, whether a book or manuscript, open or shut. His words, too, seem to issue from this region: but when brought out of this state, either at the order, even internal, of the magnetiser, or, as it were, spontaneously at the moment previously announced by himself, he appears to be not at all conscious of the things gone through by him in the pa-

roxysm, how long soever it may have lasted: what may have been demanded of him; what he may have answered; what he may have undergone; all these things have left no idea in his understanding, nor the least vestige in his memory.

"Therefore, the undersigned petitioner, seeing valid reasons for doubting whether such effects, the occasional cause of which is shown to be so little proportioned to them, be simply natural, earnestly and most fervently prays that your Eminence in your wisdom, for the greater glory of the Omnipotent, as well as the greater good of souls, which have been redeemed by the Lord at so great a price, may be pleased to decide, whether, admitting the truth of the premises, a confessor or curate may safely permit to his penitents or parishioners: —

"1. That they practise animal magnetism, endowed with such, or other like characteristics, as an art auxiliary and supplementary to medicine.

"2. That they consent to be thrown into such a state of magnetic somnambulism.

"3. That they consult persons magnetised in such a manner either concerning themselves or concerning others.

"4. Or that they undertake one of these last-mentioned three things, having first taken the

precaution of formally renouncing in their minds every diabolic compact, explicit or implicit, as well as all satanic interventions, since, notwithstanding such precautions, similar effects, or some such effects, have been obtained by some persons.

"Most Eminent Lord, by command of the most Rev. the Archbishop of Lausanne and Geneva, your Eminence's most humble and most obedient servant, "JAMES XAVIER FONTANA,

"Chancellor of the Episcopal Chancery.

"Friburgh, in Switzerland, Episcopal Palace, the 19th of May, 1841."

RESPONSE.

"The Sacred Penitentiary, the premises having been maturely weighed, considers that these should be answered as it now answers: —the use of magnetism, as set forth in the case, is not permissible.

"Given at Rome, in the Sacred Penitentiary, the 1st day of July, 1841.

"C. CARD. Castracane, M. P.

"PH. POMELLA, of the S. P. Secy.

"Certified as a copy conformable to the original. —Friburgh, the 26th July, 1841.

"By order, J. Perroulaz, Secretary of the Bishopric."

It will be observed, that though the subject is held in dread by the reporter, as probably of diabolic origin, yet it is treated as a "great fact," known to, and believed in, by a large community, so that catholics and protestants are found alike professing a belief in Mesmerism. If the twentieth part of what was reported was true, it well deserved careful investigation; and, as I had no dread of knowing anything that God has permitted to be known, I determined to try to find out the truth for myself, on the first favourable opportunity. In choosing a proper subject to experiment upon, I should probably have selected some highly sensitive female of a nervous temperament, and excitable imagination, who desired to submit to the supposed influence. But, I beg it to be particularly remarked, my first essay was not guided by theory, and was not made on a subject supposed to be favourable. On the contrary, the very worst specimen of humanity, theoretically considered, was the person destined to be my first mesmeric victim; he being none other than a Hindoo felon of the hangman cast, condemned to labour on the roads, in irons. Accident alone determined my choice, and decided the matter for me, perhaps much better than theory would have

done; for I should as soon have thought of commencing operations on the first dog or pig I met on the road, as of selecting this man for his good mesmeric "materiel."

There are some interesting particulars in this first successful mesmeric experiment in India, to which I beg leave to direct the reader's attention.

I. The purely accidental and unpremeditated nature of the experiment.

II. All want of consent between the parties.

III. The operator's want of belief in his own power; for I had never seen Mesmerism, and all I knew about it was from scraps in the newspapers.

IV. The absolute ignorance of the patient; it being impossible that he should ever have heard of Mesmerism.

V. The impossibility, therefore, of imitating the mesmeric phenomena.

Under all the circumstances of the case, collusion between the parties will not, I presume, be suspected: and every possible care was taken to exclude any source of fallacy in the experiment. European gentlemen, sceptical and critical, or so strong in disbelief that they would have rea-

soned themselves out of their senses, if they could: Ignorant Hindoos and Mussulmanns, who merely used their eyes and ears without an attempt at reflection, will all be found, by their separate and independent reports, bearing testimony to the same series of phenomena. As I might never succeed again, I endeavoured to make this case as perfect as possible in all its parts, by bringing the senses of different people to bear upon it, in all its stages; and, I must say, that I cannot see any possible opening for mistake or deception. It has for many months been before the Indian public, who were invited to point out any source of error that may have escaped me, and no attempt has been made to disprove the facts, or explain them away, except by the easy and sweeping charge of imposition in the patient, and delusion in the observers; of the probability of which I shall now give the reader the means of judging.

First Experiment.

Mádhab Kaurá, a hog-dealer, condemned to seven years' imprisonment, with labour on the roads, in irons, for wounding a man so as to endanger his life, has got a double Hydrocele.

He was ordered to be taken from the jail to the charity hospital, to be operated upon.

April 4th.— The water was drawn off one side of the scrotum, and two drachms of the usual cor. sub. injection were thrown in. On feeling the pain from the injection, he threw his head over the back of the chair, and pressed his hands along the course of the spermatic cords, closing his eyelids firmly, and making the grimaces of a man in pain. Seeing him suffering in this way, I turned to the native sub-assistant surgeon, an *éleve* of the medical college, and asked him if he had ever seen Mesmerism? He said, that he had seen it tried at the medical college, but without effect. Upon which I remarked, "I have a great mind to try it on this man, but as I never saw it practised, and know it only from reading, I shall probably not succeed."—The man continuing in the position described, I placed his knees between mine, and began to pass my hands slowly over his face, at the distance of an inch, and carried them down to the pit of his stomach. This was continued for half an hour before he was spoken to, and when questioned at the end of this time his answers were quite sensible and coherent.

He was ordered to remain quiet, and the passes were continued for a quarter of an hour longer—

still no sensible effect. Being now tired (thermometer 85°), I gave it up in despair, and declared it to be a failure. While I rested myself, the man remained quiet, and made fewer grimaces, and when ordered to open his eyes, he said there was a smoke in the room. This roused my attention, and tempted me to persevere. I now breathed on his head, and carried my hands from the back of his head over his face and down to the Epigastrium, where I pressed them united. The first time this was done, he took his hands off his groins and pressed them both firmly down upon mine; drew a long breath, and said, "I was his father and mother, and had given him life again." The same process was persevered in, and in about an hour he began to gape, said he must sleep, that his senses were gone; and his replies became incoherent. He opened his eyes, when ordered, but said he only saw smoke, and could distinguish no one: his eyes were quite lustreless, and the lids were opened heavily. All appearance of pain now disappeared; his hands were crossed on his breast, instead of being pressed on the groins, and his countenance showed the most perfect repose. He now took no notice of our questions, and I called loudly on him by name without attracting any notice.

I now pinched him, without disturbing him, and then asking for a pin in English, I desired my assistant to watch him narrowly, and drove it into the small of his back; it produced no effect whatever; and my assistant repeated it at intervals in different places as uselessly. His back had continued to arch more backwards latterly, and he now was in a state of "opisthotonos;" the nape of his neck resting on the sharp back of the chair, and his breech on the edge of it. Being now satisfied that we had got something extraordinary, I went over to the Kutcherry, and begged Mr. Russell, the judge, and Mr. Money, the collector, to come and see what had been done, as I wanted the presence of intelligent witnesses in what remained to do. We found him in the position I had left him in, and no hallooing in his ears could attract his attention. Fire was then applied to his knee, without his shrinking in the least; and liquor ammoniæ, that brought tears into our eyes in a moment, was inhaled for some minutes without causing an eyelid to quiver. This seemed to have revived him a little, as he moved his head shortly afterwards, and I asked him if he wanted to drink; he only gaped in reply, and I took the opportunity to give, slowly, a mixture of ammonia so strong that I

could not bear to taste it; this he drank like milk, and gaped for more. As the "experimentum crucis," I lifted his head, and placed his face, which was directed to the ceiling all this time, in front of a full light; opened his eyes, one after the other, but without producing any effect upon the iris; his eyes were exactly an amaurotic person's, and all noticed their lack-lustre appearance. We were all now convinced that total insensibility of all the senses existed, and I ordered him to be placed on a mattrass on the floor, and not to be disturbed till I returned. It was now one o'clock, the process having commenced at 11 A. M.

I returned at three o'clock, and was vexed to find that he had awoke, and been carried back to the jail hospital. The native doctor of the jail had come in; and on hearing that the Sahibs could not awake the patient, he set about doing so, and succeeded by throwing water on his face, &c. I again went to Messrs. Russell and Money, and requested them to accompany me to the jail, to be present when he was interrogated regarding his reminiscences; and we put down a series of questions to be put to him, at once, and without explanation. We found him looking well, with a lively expression of face, and the following questions were put to him; his answers being taken down at the same time: —

"How do you feel?"

"Very well."

"Any pain in the throat, or elsewhere?"

"A little uneasiness in the throat, no pain any where else."

"What has happened to you to-day?"

"I went in the morning to the Imbarah Hospital, to get the water taken out of my scrotum."

"Was the water drawn off?"

"Yes."

"What do you remember after the operation?"

"I went to sleep soon after, and remember nothing else."

"Did you eat or drink after the operation?"

"I felt thirsty, but got nothing to drink till Kurreem Ali, the native doctor, awoke me."

"Did any body prick, or burn you?"

"No, no."

"Did you smell anything disagreeable?"

"No."

"Were you happy when asleep?"

"Very."

"Did you hear any thing when you were asleep?"

"I heard voices, but did not understand them."

"Did you see any gentleman in the hospital but me?"

"No."

"Did you feel any pain in the scrotum after going to sleep?"

"I felt none till I awoke."

"Any pain in that part now?"

"A very little."

"How many motions have you had to-day?" (he was suffering from chronic diarrhœa.)

"Four, before going to the hospital, none since; belly is much easier than it has been for some time."

Having answered all these questions readily and frankly, he began to cry, thinking it was some kind of judicial investigation, I suppose.

"The above is an exact relation of what took place in our presence, and we are thoroughly convinced that there was a complete suspension of sensibility to external impressions of the most painful kind.

(Signed) F. W. Russell.
D. J. Money.
Budden Chunder Chowdaree,
Sub-Assistant Surgeon."

April 5th.—There is less than the usual inflammation, and he makes no complaint. I intend to operate on the other side in a few days, mes-

merising him first, if possible, and have invited many persons to be present.

Second Experiment.

April 6th.—11 o'clock, A. M. The inflammation has become high during last night; the part is hot, and excessively tender; the lightest touch causes great pain. Skin hot; pulse quick. I could not resist the temptation to satisfy myself still further, and relieve him at the same time. So, turning to the native doctors, I said that I would again try the "Belatee Muntur" (the Europe charm), and began the process as before; he lying in bed. In ten minutes the mesmeric haze (smoke he always calls it) was produced. After half an hour he still complained of the pain in the inflamed part, and could not bear its being touched; in three-quarters of an hour the coma was established, and I squeezed the inflamed part with no more effect than if it had been a bladder. Having business to attend to in Chandernagore, six miles off, I called, in passing, on the Rev. Mr. Fisher, and said that he might now satisfy himself by going to the hospital in my absence; and that, except mesmeric means, he was at liberty to use every possible means to awake him, or make him feel. Here I have the pleasure to in-

troduce a report of the proceedings of Mr. Fisher and Mr. Money while I was at Chandernagore :—

" *To J. Esdaile, Esq.*

My dear Sir,—I beg to certify that I twice saw the native whom you had put into a mesmeric trance, or state of catalepsy, and from the successful application of different tests I have no hesitation in stating, should my statement add any weight to your own testimony, or be of any service to the cause of the imperfectly known, and hitherto unfairly treated, science of Mesmerism, that the individual in question was in that state entirely insensible of pain, and that I believe, if you had cut his leg off, he would not have felt it. I saw, when I was in England, both publicly and in private, many cases of Mesmerism accompanied by unnatural and wonderful phenomena, without being convinced. But your case is one so free from all possibility of suspicion, that to have doubted it, one might as well have doubted his own existence.

" Yours truly,

" D. J. Money.

" Hooghly, 9th April, 1845."

" I have only to add to the above, that I was present upon the last occasion referred to by

Mr. Money, and fully concur with him in thinking that the patient, during the Mesmeric trance, was totally insensible to pain. Indeed, all the senses appeared to be unnaturally suspended from any manifestation of their ordinary operations, and every available test was tried in vain. Dr. Esdaile upon this occasion was absent at Chandernagore, having previously put the patient into the trance.

"F. FISHER."

Returned to the hospital at 3 o'clock, and found him lying just as I had left him. Awoke him in a few minutes, by rapid transverse passes, blowing in his face, and giving water to drink. Is free of pain, and still desires to sleep; says his head turns.

Translation of a Report from Kurreem Ali Khan, native doctor, of what he saw and heard in the Jail Hospital, on the 6th April, 1845.

"At 11 o'clock, A. M., the patient, Màdhab Kaurà, was in a fever, and there was an acute pain in the scrotum. The worthy Dr. Sahib (may he ever prosper) came to the hospital, and began to do something to him. When the experiment was going on, Màdhab was asked,—

"What do you see?"

"I cannot see clearly; something like smoke is before my eyes."

"Do you see the doors?"

"No, nothing but smoke."

"Do you see Dr. Sahib?"

"No, I see nobody, but perceive some one is talking near me."

"Is there any pain in your body?"

"Yes, breathing causes pain in the belly."

"Is there pain in the scrotum?"

"Yes, as acute as ever."

"How do you feel now?"

"I feel cold and sleepy."

After the Doctor Sahib had tried for nearly three-quarters of an hour, he fell into a deep sleep, and there seemed to be no pain in the scrotum; he slept so sound that even the pricking of his body with a pin did not restore his senses, or awake him. Before, a touch of the scrotum was painful, but after he was asleep, even pricking it caused no pain whatever.

He continued in this state for three hours, when, the Dr. Sahib calling him aloud twice or thrice, he came to his senses, and opened his eyes. He asked for water, which he drank, and, feeling cold, covered himself."

Translation of a Report from Noboo, native doctor, of what he saw and heard in the Jail Hospital, on the 6th April, 1845.

"On the morning of the 6th of April, I went to the hospital, and found the body of Màdhab Kaurà hot and feverish, and he felt a great pain in the scrotum.

At 11 o'clock, Dr. Esdaile, the civil doctor, came and made some operations on the body: something I do not know. While the operation was going on, the patient was asked if he could see plainly, but said no. When asked if he could see any one, he answered, that he could see no one, but knew by the sounds that some people were there.

Again he was asked if he felt any pain; he said, that he felt a severe pain in the belly, on breathing, and also in the scrotum, and felt very cold. Soon afterwards he became senseless.

At 2 o'clock P. M. the Rev. Mr. Fisher and Mr. Money came to the hospital, and tried to bring him to his senses by pricking him with a pin, putting fire on his hand, and beating a gong in his ear, but all proved ineffectual."

I forgot to note down what these reports notice; —his complaining of feeling cold soon after

the process began; and that when I left him the temperature of his body was natural.

On these two occasions, the effects were witnessed by all the patients and hangers-on in and about both hospitals.

April 7th. — Has had a good night, is a little feverish; pain in scrotum much less. He now complains, for the first time, of pain in the places where he was pricked and burned.

This makes one ashamed of incredulity, and I will never put a patient to the "question" in this way again. It is only excusable for the first time, when we can hardly believe the evidence of our senses.

Third Experiment.

April 11th. — Took the sub-assistant surgeon with me to-day to the Jail Hospital, and desired him to watch the time taken to produce the different effects. There is still considerable pain in the side operated upon. Pulse regular, 60; skin warm. At 11 o'clock A. M. I seated him on the floor with his back against the wall; placed myself before him on a stool, and proceeded pretty much as before. The process, in one particular, was varied; I leaned my elbows upon my knees, placed my mouth over the back of my joined

hands, and breathed along their upper surface; the points of my fingers being pointed steadily at his eyes, nose, and forehead, in succession. This seemed to be very effectual, and was done with the idea of concentrating the mesmeric influence of the whole body into one conductor. It was curious to observe that he had begun to think on the subject, and was observing the effects for himself, and testing his senses as we proceeded. After manipulating for a few minutes, he opened his eyes, looked sharply and minutely about him, and being asked if he saw quite well, he said, "Oh, yes." In a minute or two he repeated his inspection, and answered again, that he saw quite distinctly; in seven minutes he again looked about him, seemed surprised, and said he only saw "smoke."

In fifteen minutes he was pinched; and when asked if any one was pinching him, he replied that he could not tell, as I might now cut a piece out of his body without his feeling it. I now tried for an abnormal mental manifestation; certainly not expecting to be gratified. I asked, —

"What will cure your complaint?"

"You know best."

"Has the Baboo any complaint?"

"How should I know?"

I understood this as a hint to attend to the business in hand, the body, and therefore proceeded to induce the mesmeric coma as quickly as possible; and succeeded in twenty minutes from the commencement. I then said to the sub-assistant surgeon that I would operate upon him in this state, if I could find some of the European gentlemen to be witnesses. On going to Chinsurah, two miles off, I fortunately found a considerable party, consisting of the Baron Law de Clapernou, Governor of Chandernagore, Mr. Russell, the judge, Mr. Wauchope, the magistrate, J. St. Pourçain, Esq., Mr. Clint, Principal of Hooghly College, and Mr. Clermont, head master of the Lower School, who all accompanied me back to the hospital. The man had fallen down, and was lying on his back. The large gong of the jail was brought, and struck violently within a few inches of his ear, with no effect. I then pierced the scrotum, and threw in the injection, without any one being sensible of the smallest movement in his face or body. His limbs were quite flexible; but on holding one of his legs in my hand for a few seconds, it gradually became quite rigid, and we could not bend it again; the same occurred in the other leg. The arms were supple, and lay in any position into which they

were thrown; and when the fore-arm was bent upon the humerus, and then let go, it fell upwards, or downwards, instantly. But on placing my united fingers over the ends of his, the arm remained fixed at a right angle in the air, and swayed to and fro, according to my movements. The insensibility of the iris was also tested, and proved.

6 o'clock, A. M. Still sleeps; most complete relaxation of all the limbs now exists. The legs and arms can be tossed about in every direction, and where they fall there they lie. Being curious to ascertain the effect of the artificial state on the natural process of inflammation, I did not awake him, but saw that the part was as flaccid as when the water was just withdrawn.

April 12th.—He awoke at 12 o'clock last night, spontaneously. Recollects nothing after going to sleep; sees the water is gone, knows not how; supposes the Doctor Sahib did it. The testicle is considerably enlarged to-day; there is little pain, and it did not swell till after he awoke. He has had chronic diarrhœa for some time; four and five motions a day, but has had none since yesterday forenoon till this morning. Natural, artificial, and diseased actions have therefore been all equally arrested for the last thirteen hours; a

practical fact of the utmost importance, which will not be lost sight of by myself, or others, I hope. What a blessed prospect this opens to sufferers who may be sensible to the Mesmeric influence! In time we may hope to discover who they are, by detecting the laws which regulate this power of Nature, and thereby save ourselves much trouble and disappointment. In the mean time let us accumulate *facts*, as the seed for a correct theory hereafter. Although I should never succeed again, I will in future think, speak, and write of Mesmerism as being as much a reality as the principle of gravitation, or the properties of opium. For, under all the circumstances, I cannot but consider these to be unexceptionable *facts;* and if I should not again be able to elicit them, it would not shake my belief in the existence of Mesmerism; I should only conclude that the failure arose from my ignorance of the conditions required by Nature, or from some personal disqualification. The rarity of the occurrence would not make it less a reality; and to deny a fact because it has been seldom witnessed, would be as reasonable as to doubt the existence of comets because they are rare appearances.

Great weight is very justly attached to *first*

experiments in any new subject of investigation, for these are often a voluntary and unexpected evolution of the powers of nature; and when the results surprise the experimenter even, we feel confident that he only relates what he actually saw, and that he is not seduced, by previous theory and prepossession of mind, to interpret appearances in support of a foregone conclusion. In making these experiments, I was in the situation of a chemist, who has heard that a new elementary substance had been discovered by a certain process, and who thereupon sets his apparatus to work in the way prescribed, and is rewarded by obtaining the same results as the first discoverer.

Besides the general results, I noted in this case the following particulars as *facts,* which determined the course of my future proceedings.

I was sure that there could be no imagination at work in the matter.

That there was no consent between the parties.

No mental sympathy.

That the patient's eyes need not be open.

I therefore came to the conclusion, that in this instance, the influence must have been of a purely physical description, and on this supposition I conducted my subsequent experiments; with what success will be shortly seen.

CHAP. III.

Mesmerism the same in India and in Europe. — Examples of Mesmeric Sleep.— Sealing of the Eyes.— Altered Sensibility.— Temporary Paralysis.— Muscular Rigidity,— Insensibility to Pain.— Exaltation of particular Organs.— Convulsions.— Delirium. — Injustice done to the Memory of the first Mesmerists. — Every available Evidence here given. — Imposture morally and physically impossible. — Mode of Proceeding. — Mesmeric and Non-Mesmeric Operations contrasted. — Physiological Demonstration of the Impossibility of Imposture.

Having, by the experiments described in the last chapter, satisfied myself of the existence of the Mesmeric power, I lost no time in applying it to practical purposes. The effects produced were nearly as various as the different persons acted upon, and corresponded perfectly with the appearances observed in Europe; and when the public see the same effects following like causes on the banks of the Thames, and the Seine, the Rhine, and the Hooghly; I presume it will conclude, that the same agent is at work, provided the same evidence, in support of matters of fact, is received for hot and cold climates, and it is not

supposed that the truth is affected by degrees of latitude. In a late No. of the "British and Foreign Medical Review," the reviewer gives a summary of the Mesmeric symptoms as known to himself, and recorded by various writers on Mesmerism, and acknowledges a perfect accord in all the accounts of the bodily phenomena. The following extract will place these appearances succinctly before my readers, and I beg them to compare my account of Mesmerism in Bengal with this statement of its effects in Europe, and then say whether the identity of the thing in the east and west is not established:—

"Sometimes, however, there is said to supervene a state of coma; at others, exaltation, depression, or some anomalous modification of sensibility; and occasionally, a state somewhat approaching to that of reverie, wherein the individual, although conscious, feels incapable of independent exertion, and spell-bound, as it were, to a particular train of thought or feeling. The occurrence of convulsive action, and of muscular rigidity, is described as taking place in some cases to a greater or less extent. These results are said to constitute the *simpler phenomena* of Mesmerism. We shall illustrate them by some extracts from accredited writers upon the subject.

"In this peculiar state of sleep, the surface of the body is sometimes acutely sensible, but more frequently the sense of feeling is absolutely annihilated. The jaws are firmly locked, and resist every effort to wrench them open: the joints are often rigid, and the limbs inflexible; and not only is the sense of feeling, but the senses of smell, hearing, and sight also, are so deadened to all external impressions, that no pungent odour, loud report, or glare of light, can excite them in the slightest degree. The body may be pricked, pinched, lacerated, or burnt; fumes of concentrated liquid ammonia may be passed up the nostrils; the loudest reports suddenly made close upon the ear; dazzling and intense light may be thrown upon the pupil of the eye; yet so profound is the physical state of lethargy, that the sleeper will remain undisturbed and insensible to tortures, which in the waking state, would be intolerable."—(*Dupotet*, p. 36.)

The above concise sketch corresponds very closely with what is laid down in other works of Mesmeric repute. A few brief quotations, exhibiting this correspondence, we subjoin. The first we take from Deleuze's Practical Instructions, wherein he states that "the magnetised feels the necessity of closing the eyes; his eyes are so

sealed that he cannot open them: he experiences a calm, a feeling of comfort; he becomes drowsy; he is put to sleep." Teste, another writer of distinction, speaking of the physical insensibility, says, "it exists, not only in the skin, but in the subcutaneous tissues, in the muscles, and even in the nervous ramifications." Dr. Passavant of Frankfort, an author often referred to, avers as follows: "As an especial effect of the power of animal magnetism, results the magnetic sleep. This is mostly deeper than ordinary sleep, the mediation of the senses is yet more decidedly suspended. The sensibility can so have vanished in a moment, that the loudest sound, the brightest light, even bodily injuries, are not perceived in this sleep." Indeed, all the authorities seem to coincide very much in their accounts, and, this we say, after referring to Chenevix, Elliotson, Townshend, Gauthier, Foissac, and others."

I shall now present to the reader illustrations of all the singular states of the system described above, and drawn from my practice here.

Mesmeric sleep.—This simulates, perfectly, sound natural sleep, and is more refreshing, even if it has been resorted to for soothing pain, or disturbance of the system, and can be had recourse to when it would be improper or useless to adminis-

ter common narcotics; — over which it has the advantage of not inducing a disagreeable constitutional derangement, after the specific influence has ceased. The restorative powers of mesmeric sleep seem to depend upon an actual infusion of nervous vigour into the body, and, when induced as a remedial agent, this may account for its superiority over common sleep.

April 7th. — Janokee-Sing, a hardy looking peon; the whole of the scrotum is sloughing, from the application of some acrid leaves, and the pain is most intense.

April 15th. — The whole scrotum has sloughed off; has not slept since coming to hospital. The compounder, a healthy, intelligent Hindoo, succeeded in putting him to sleep to-day, in half an hour. He awoke when pinched, or called upon by name, but instantly fell asleep again.

April 16th. — Has slept, almost without interruption, from eleven o'clock A. M. yesterday, till seven o'clock this morning, the only sleep he has had since he was burned.

April 19th. — He has been mesmerised daily, and sleeps the greater part of his time; to mesmerise him, becomes more easy every day; — and a few minutes now suffice to overcome him.

April 20th.—Kowsoalla; aged forty, a peasant woman. I subdued her to-day, for the first time, in ten minutes: she awoke when called upon, but, in a second, fell asleep again. The limbs are quite loose, but when I let them remain for a moment in any new position, they become rigid, and require to be dragged into a new attitude: the muscles yield precisely like lead, without a vestige of re-action, when the bending force is removed.

April 25th.—She can now be mesmerised in a minute.

May 3rd.—Bissumber Chowdry: has had retention of urine for three days; the bladder is prominent at the navel, and no instrument can be introduced. Ordered to lie in the easiest posture, and to be put to sleep, if possible.

May 4th.—He slept for two hours yesterday, and voided his urine freely, when he awoke.

May 4th.—Deenoo, a prisoner; convalescent from cholera, is tormented with incessant hiccough for the last twenty-four hours.

Opii Grs. ii.
Confect. Arom. Grs. x.

If this does not check it, a blister to be applied over the diaphragm.

May 5th.—No better—To be mesmerised. I returned after three hours, and found him asleep —awoke him: has no hiccough.

May 11th.—No return of the hiccough.

Sealing of the eyes.—The quivering of the eyelids, and their subsequent spasmodic closure, is one of the most specific mesmeric symptoms.

June 27th.—The woman Alunga complains of considerable pain from the extension of her arm yesterday, and the nerve at the elbow is very tender. I passed my fingers along the course of the nerve for a few minutes, which removed the pain; I then held my fingers before her eyes, and in a few seconds she fell into my arms quite insensible. I soon after awoke her, and she sat up conversing with us as usual, but could not possibly open her eyes; when ordered to do so, she was obliged to pull the eyelids asunder with her fingers; but they would not remain open, and the difficulty was only removed by my rubbing, and blowing in her eyes. I have shown this peculiarity, in numerous cases, to great numbers of persons.

Altered sensibility.—Rajah ——, an intelligent Hindoo gentleman, who has received an English education, and speaks our language perfectly well, wished to be operated on for hydrocele, while in the mesmeric trance. After half an hour's manipulating, I extended his arm, and it took a fix in any position I put it: it was put perpendicular into the air, and remained motionless for ten minutes; on depressing it again, it bent like lead, in the true cataleptic fashion. Having replaced his arm at his side, I began to open his dress, when he awoke with a violent start, and instantly said that he had no feeling in his arm; that it was very cold, which we all felt, and on putting a thermometer into his hand, we found it to be two degrees colder than the other. He remembered my raising his arm, and felt me let go my hold of his thumb, but what became of his arm after that, he could not tell—he imagined it was lost. Having lately felt the sensation of galvanism, he said, that he felt slight shocks in his skin during the process, exactly like what he had experienced from galvanism. I have observed this in other patients.

Temporary paralysis of muscles.—Madub, a shop-keeper. This man was operated on for

hydrocele, when in the trance, without feeling it, and ever since has been very easily affected; I have, therefore, made him the subject of several experiments. In a minute or two, his eyelids begin to quiver, then slowly close, opening heavily at short intervals, till at last they remain closed altogether. If at this stage he is ordered to open his eyes, the effort to do so only strains the eye-lids, which appear to be glued together, and he says it is impossible to separate them. Being desired to help himself with his fingers, he rubs his eyes violently, and then forcibly separates the eye-lids, when nothing but the white of the eye is seen; the cornea being turned up to the roof of the orbit. While rubbing his eyes, I sometimes seize his hands and extend his arms horizontally on either side; the arms become fixed in a moment, and when desired to apply his hands to his eyes now, he says that he cannot, that he does not know where his arms are. If I blow on one arm, or impel a current of air against it by fanning, the rigidity disappears, and he uses his arm as desired, but the other continues catalepsed and useless, till relieved in the same way. When I urge him to use both arms, he says he has only one, and on being desired to seek for the other, he passes the flexible arm across his body, and

gropes at the other side for it, but soon gives up the search, saying, it is not there: being desired to look for it higher up, he carries his hand up the opposite side till he reaches the catalepsed arm, and tries in vain to depress it; the arm remains horizontally extended, and resists all his efforts.

Muscular rigidity—Is usually attendant on mesmeric coma, of which numerous instances will be given, when treating of the medical part of the subject. My first patient, by repeated experiments, became excessively sensitive, and affords a good specimen of mesmeric catalepsy.

May 13th.—Madub Kaurá; this man can be catalepsed in less than a minute; and the effects are passing strange. If, when he is standing, I point my fingers at him for a few seconds, his eyelids immediately droop, his arms fall by their mere weight to his sides; his whole body begins to tremble, owing to the incipient loss of command over the muscular system; and, if not supported, he would fall down in a heap. But give him a moment's support, and he becomes as rigid as a statue, and if the centre of gravity is well poised he will remain in any posture he is put into, and that for a longer time than I have waited to see.

The muscles must be dragged out of the fixed position they have assumed, and allowed a moment to contract in a new attitude, out of the perpendicular; for if suddenly pushed, he goes down, head foremost, like a statue from its pedestal, and his life is endangered. However inconvenient, or grotesque, the position may be, he is equally well satisfied, and continues to sleep, quite comfortably, with his heels behind his neck; and if his forehead is placed against the wall at an acute angle, he remains sticking out from it, like a buttress, longer than I have ascertained.

Insensibility to pain.— This will be copiously illustrated in my numerous surgical operations.

Somnambulism— Will have a chapter to itself, and need not be now introduced.

Exaltation of particular organs,—convulsions,—delirium.—Instances of all these will occur in the course of this work, and be found to correspond with the irregularities observed in Europe; so that the general rule, and its exceptions, will be recognised to be the same in the eastern and the western hemispheres; thereby proving the universality of the truths declared by many honest and

independent men, during the last sixty years, and for propounding which they were laughed at, and scorned.

Apart from the personal gratification of being admitted to see the secret processes of nature's workshop, and the advantages of being able to imitate her processes, for the alleviation and removal of human suffering; it will be a great satisfaction to me, if my evidence and labours should assist in raising the dishonoured dead into the public consideration and respect, due to them as benefactors of mankind, and in exciting a regret that wisdom called so long in the streets, without any one regarding her.

I now know (and I deplore my long ignorance) that the battle was fought, and won, before I was born, by the truthful and benevolent Puysegur, Deleuze, and their companions, and that I, under the tropics, am only again demonstrating what they, on the banks of the Seine, had long ago established. The people of the continent have been familiar with both the good and the evil of Mesmerism for the last thirty years, while we in England are only now giving an unwilling ear to the expounders of a law of nature, which is as much a part of the human constitution as the processes of thought and digestion. It is to be hoped

that, on this subject, our neighbours will no longer have reason to reproach our insular ignorance and presumption, and that if Mesmerism is rejected by the English public, it will be after study and experiment, and not from prejudice and passion.

Knowing the new and wonderful nature of the subject, and that the public was ill prepared to receive the naked truth on individual testimony, I have called in all the available evidence on the spot; and the facts related by me will be found to be vouched for by disinterested, honourable, and intelligent gentlemen, both residents and strangers; and if there is not a cloud of European witnesses, it is simply because no more exist in this neighbourhood. I would have preferred the plain of Calcutta for my theatre, and all the inhabitants for spectators, if it had been possible. All I have done, or may hereafter do, has been done, and shall be done, in open day, and every case related has had from half a dozen to hundreds of witnesses. The patients are on the spot, or can easily be found, and a host of eye-witnesses are ready for any one who may take the trouble to investigate the matter on the spot.

Taking these general circumstances into account, I might leave the cases to be adduced to

speak for themselves, but I hope to be excused for pointing out some particulars which will, I trust, demonstrate that imposture, in the generality of my cases, is morally and physically impossible.

It is *morally* impossible that I could have taught my patients what I did not know; for I knew not the existence of the diversified symptoms they exhibited, till, day by day, I became a witness of their unexpected occurrence. I had never read a Mesmeric book, when I made my first experiment; and having succeeded in getting nature to speak, I determined to listen only to her for some time, and for months purposely refrained from reading on the subject, in order that my senses might not be predisposed to see things in any particular light, and that my judgment might be left unbiassed by the opinions of others. My reason did not teach me to expect what was presented to my senses; but was gradually instructed by what I saw and did: and all that I know about Mesmerism has been acquired by reading the book of nature, without guide or interpreter. If I was ignorant of the subject, the peasants and coolies of Bengal must have been equally so, I presume. No rumour had gone abroad regarding the existence of such

a power; Mesmerism had not become the village-talk in Bengal, so as to enable some clever rogue to exhibit the phenomena of which he had heard: — there was no type to imitate, therefore imitation, in the first instance, was impossible. Be it observed also, that the cases did not happen among people in hospitals at the same time, but arose, day by day, among patients newly arrived from different parts of the country. The routine followed is this. A person presents himself before me for the first time, and I see he has a disease requiring an operation for its removal: he is desired to go into another room (which is dark), and repose himself after his journey, not a word being said about an operation, as this would cause a mental excitement, destructive to the mesmeric influence. One of my assistants follows him; seats himself (if unperceived, so much the better,) at the head of the bed; and by using the process to be hereafter described, often reduces the patient to a state of coma by the end of my visit: I then do what is necessary, whether it be to take off, or straighten a limb, without his knowledge or consent. Now, supposing these poor ignorant people to be impostors, whence comes their intimate knowledge of the mesmeric phenomena, from the quivering of an eye-lid

onwards to insensibility to the most cruel tortures? If they are not what they seem to be, then are they heaven-born impostors, or have had supernatural instruction, — on earth they could not have learned it.

It may be said, that it is the taste of the coolies of Bengal to have themselves cut to pieces, and to have corrosive acids, and red-hot pokers applied to their sores, without showing a sign of life; or that, knowing my hobby, they come from all quarters to be silently tormented, in order to please my Honour. Or we may be told, that the passive endurance of pain is no sign of the absence of it, for the North American invites his enemy to tear him at the stake, and the Indian Fuqueer voluntarily torments himself.

To do justice to this ingenious hypothesis, I shall present the reader with some examples of the way in which pain is borne by my patients, in the mesmeric and non-mesmeric condition of the body.

June 12th.—Lokee, a peasant woman, aged 60, has a tumour on the calf of the leg of nine years' standing: it is full of deep ulcerations and maggots. I tried to subdue her yesterday, but the pain did not allow her to get beyond common sleep. To-day, after much trouble, first by one

person, and then another, she was entranced, and I cut out the tumour in the presence of Captain Elder, without her feeling it, and we left her sleeping.

June 13th. She awoke three hours after the operation; felt no pain on waking, and asked me to-day, who cut off the tumour?

Oct. 24th. The woman Lokee has come back to hospital, with a return of the tumour, cut out in June last, to be mesmerised.

Oct. 27th. She has been mesmerised daily, for two hours, but without effect. I therefore operated on her to-day, as we could spare no more time for her, others requiring equal attention. The poor old woman screamed miserably the whole time, crying, that I was murdering her; and she continued in the greatest pain for hours afterwards.

If the old woman shammed insensibility on the first occasion, why did she not do so on the second? She had had practice; every facility and encouragement were given her, and she knew what was wanted of her, and yet would not pretend to be asleep!

This perverse and inconsistent conduct appears to me to be easily accounted for, from the very

fact of her being aware of what was wanted and intended to be done: her anxiety to go to sleep neutralised her good intentions; — excitement of mind being destructive of the mesmeric influence for the production of coma.

August 13th. — Dr. Finch freely applied muriatic aid (such as is furnished by the Company's dispensary) to a sore, covering all the right temple of the woman Gendo (who was mesmerised, in his presence, by one of my assistants,) without her showing the smallest degree of consciousness; and it was with great difficulty I awoke her, after he had failed to do so. During the burning with the acid, her pulse fell from 88° to 80°, and her respiration, which was quite natural before she was mesmerised, became entirely diaphragmatic, and abdominal; the voluntary and semi-voluntary muscles of the chest being completely paralysed.

August 18th. — Dr. Bedford to-day asked permission to apply the acid to the woman Gendo's sore, when she was awake; and though I thought this most irrational scepticism (he having witnessed Dr. Finch's experiment) I consented, in order that it might not be said I interfered to save my phenomena. He accordingly wetted

the end of the glass stopper with the acid, and touched the sore with it, and the woman, for a few seconds, did not show any signs of acute pain. There could be no doubt about it, she was found out! The arch deceiver, having set a snare and delusion for me, was now laughing at my beard; and I was not relieved from my thick-coming fancies by Dr. B. kindly suggesting, "that she was probably a very insensible person naturally." I was soon roused from my trance of bewilderment, however, by hearing the woman cry out, that "we had put pepper to her head!" and she sat up, showing signs of great pain; immediately after, she declared "her head was on fire," and got out of bed, walking about distractedly in great agony. I ordered her head to be bathed, and, as the best anodyne, threw her into the trance: the sore being surrounded by tubercles, which retarded its healing, I took the opportunity to pare them off; and to this she was perfectly indifferent. In half an hour, I awoke her with much difficulty, in order that Dr. B. might hear her first words, which were, that she knew nothing about what we were talking of, having even forgotten the burning; an invasion of the waking by the sleeping state, which will be seen in another patient, when Mrs. Clermont's case is

given. So that if Mesmerism did not protect this old woman, we have the curious fact of muriatic acid, applied in large quantities to a raw surface by Dr. Finch, acting as a direct anodyne and narcotic, calming at the same time the circulation, and revolutionising the respiration, while a drop in the hands of Dr. Bedford causes the greatest suffering and general excitement! — "*Non nobis tantas componere lites.*"

Oct. 10th. — Beppo Dass, a prisoner, was entranced to-day; in the presence of Dr. Roer, Mr. Bradbury, Major Riddell, Mr. Higgins, Mr. Muller, Mr. Graves, Messrs. Savigny, Mr. Bartlett; and I operated on him for hydrocele. The injection was thrown in without his showing a vestige of feeling, and his arm, which I had placed in the air, on purpose, at the commencement, never moved, and had to be taken down after the operation: this was the second operation performed on the man during the last fortnight; and on both occasions he slept for two hours afterwards, knew nothing of what had happened on waking, and felt no pain till the artificial inflammation commenced at 9 o'clock at night; the operation having been performed at noon. This has been called a painless operation.

" They laugh at scars who never felt a wound,"

and I shall therefore transcribe a passage from a friend's letter, written shortly after the publication of my first case.

" When I was operated on, some years ago, for hydrocele, and the injection was thrown up, the pain was like a coir rope, round my loins, being pulled at each end by some persons as hard as they could; and the perspiration ran down from my head as if some one was sprinkling water on my hair; so this is what you have laid dormant by your Mesmerism."

But it is for the sequel of this case, that I here quote it, and in order to show the man's behaviour in his natural and artificial states. On the day after the operation, the inflammation is usually high, and from the sensitive nature of the parts, pressure is excessively painful. Now, on both occasions, I have requested numerous gentlemen to press the part, and ascertain if it was *really* painful: " a question not to be asked," was always their reply. The man was then entranced, and the experiment repeated by the same persons, when he allowed the part to be pressed as if it was a bottle: — he was then awakened, and on being now pressed, showed all the signs of instant and acute pain.

The cases above cited, along with, if I may use the expression, very numerous *painless severe* surgical operations, might be safely adduced as demonstrations of the physical impossibility of imposture; but I shall now submit to the physiologist a series of facts which, to him, will be more convincing than all the cutting, tearing, and lacerating we can invent. For although we may pretty certainly conclude, that men will not exhibit insensibility to torture, without some adequate object to be gained, yet the incentive may escape our observation, or be unintelligible to us. It is, therefore, desirable to discover something which it is *impossible* for man in a natural condition to do, under the influence of any passion, or under the temptation of the highest bribe. To perform the following feats, will, I imagine, be found above the power of the most accomplished impostor: to keep the pupils dilated, without the use of drugs, in passing from darkness into sunshine, — to lower the pulse at pleasure, — to breathe only by the diaphragm, for hours, and diminish the temperature of the body, at will. The dilation and insensibility of the pupil are recorded in my first case, and have since been frequently seen.

June 11th. — Kaloo, a Fuqueer, has an excres-

cence, larger than a man's fist, at the end of his penis, and the body of the organ is also much enlarged. I entranced him in a few minutes, on the first trial, and in the presence of Major Riddell, Captain Anderson, Mr. Bennett, and Mr. Jackson, dissected out the organ, but was obliged to sacrifice the glans, as it was a cartilaginous degeneration of all the structures of the part :— the man did not awake till I was amputating the organ, after a long dissection. Wonderful to say, he relapsed into the trance again in a few minutes, and remained for twenty minutes, quite rigid, and insensible, with his eyes wide open, and the pupils dilated, in a full noonday light, to which they were wholly insensible. This is not the only instance in which the eyes have been wide open during the trance, and would not remain shut when I closed them, showing, I conceive, the absolute extinction of muscular power. In most cases, the muscles of the eyeball continue to act involuntarily, after the rest of the muscular system has gone to rest, and on opening the eyelids, the ball of the eye is seen rolling round the orbit, like an agitated magnetic needle. Under the most intense degree of the influence, the muscles of the eye, and iris, also lose their contractibility, and the eye becomes as motionless and insensible

to light as that of a dead man. That the second trance was not a faint, we all satisfied ourselves, not only from the general rigidity of the body, but from the regular *natural pulse.*

Sept. 17th.—In the presence of the Reverend Mr. Fisher and Dr. Heathcote, I to-day operated for cataract on a man while in the mesmeric trance. The pupil was so much dilated that Dr. H. asked if belladonna had been applied? After depressing the lens, and withdrawing the needle, the lens rose again, and such was the continued dilation of the pupil, that it passed into the anterior chamber, and came in contact with the cornea; the man being insensible all the time.

Sept. 18th.—To-day, in the presence of the Reverend Mr. Bradbury, I entranced a man for the first time, in the hope of subduing an inflammation of one eye, by removing all pain and irritation, and thereby allowing the restorative powers of nature to act undisturbed: he was entranced sitting on a stool, in order to lessen the flow of blood to the head. We counted his pulse beforehand; it was 100 in the minute; respiration 20; thoracic movement natural; temperature higher than usual. After twenty minutes, his

pulse had sunk to 70, his respiration to 18, and, by comparing his chest with that of a man lying alongside of him, we ascertained that there was *not a vestige of thoracic movement.* All above the diaphragm was as fixed as the trunk of a statue, and the temperature of his body had become lower than natural.

If these tests are not considered an "*experimentum crucis,*" I am at a loss to imagine what will be reckoned more satisfactory by the human physiologist. It appears to me, that when we see the *involuntary* organs of the body revolutionised, it is absurd to attribute it to the effect of the *will.*

CHAP. IV.

Somnambulism. — Definition. — Singular Introduction to it. — Suspected Child-Stealing by its Means. — First Experiment in making a Somnambulist. — Trial of Mesmeric Skill in a Court of Justice. — Men stolen out of Court. — Truth of Mesmerism publicly proved. — Natural Sleep, and its Varieties, can be imitated by Artificial Means. — Mesmeric Sleep. — Mesmeric Day-mare. — Mesmeric Sleep-walking. — Mesmeric Sleep-waking. — Mesmeric Dreaming. — How to make Somnambulists. — Imitative Stage of Somnambulism. — Communicative Stage of Somnambulism. — Mesmeric Catalepsy. — Mesmeric Coma. — Natural Clairvoyance. — Mesmeric Clairvoyance. — Nature of the Mesmeric Power. — Illustrative Examples.

BEFORE submitting to the reader the results of my observations on somnambulism, I beg leave to prefix the following summary of the appearances recognised as distinctive of the somnambulistic state in Europe. It is given in the Brit. and For. Med. Review, already quoted:—"Somnambulism is a condition in which certain senses and faculties are suppressed, or rendered thoroughly impassive, whilst others prevail in most unwonted exaltation; in which an individual, though asleep, feels and acts most energetically, holding an anomalous species

of communication with the external world, awake to objects of attention, and most profoundly torpid to things at the time indifferent; a condition respecting which, most commonly, the patient on awaking retains no recollection; but, on any relapse into which, a train of thought and feeling related to, and associated with, the antecedent paroxysm, will very often be developed."

I intended to have reserved this branch of the subject till I had examined it in all its purely medical bearings; but I was forced, by most extraordinary circumstances, to enter prematurely into this difficult and obscure field of experiment, in order to enable me to give my evidence in a court of justice; and in describing my experiments, I hope it will be borne in mind, that I had never seen a somnambulist, or thought of making one, up to this date. My first essay was as extemporaneous and accidental as the production of mesmeric coma, on the first occasion I tried to mesmerise:—the facts are simply these.

June 17th.—About a fortnight ago, I was driving through Hooghly Bazaar, and saw a crowd collected before the police office. On asking what was the matter, I was told that a man had been apprehended in the act of stealing a boy, and that the parties were inside the guard-

house. Upon hearing this, I entered the house, and found a boy of ten or twelve years old, sitting on the lap of a man who was said to have rescued him. The boy was half stupid, and one of his eyes was swollen; I therefore ordered him to be taken to the hospital. The culprit was then shown to me. He said he was a barber; and a bundle, containing his implements of trade, was produced: this I carefully examined, but only found the usual barber's tools. The boy soon recovered his senses, and told me, readily and consistently, the following tale, which I again heard him repeat before the magistrate, in a different sequence, but without a tittle of variation. He said, that early in the morning he went into a field close to his house, and that shortly after, a strange man left the road, and came up to him: as soon as he was near him, he began to mutter charms, and then took hold of his hand; very soon after, he passed his hand across his eyes, and that thereupon he lost his senses, and only recollected that the man led him away, but without force, and that he felt compelled to follow him. When he came to his senses, it was at the gate of Chandernagore, two miles from where he had met the man; and this was all he had to say. He had not eaten, drunk, or smoked, in company

with the man; and his master and friends all said he was a clever, well-behaved boy, and had never been known to have fits, or walk in his sleep. I then examined the man who was said to have rescued him: his evidence was to this effect; that on the morning in question, he saw the boy, whom he knew very well, following a strange man; that he stopped him, and asked what he was doing there? The boy made no answer, and appeared to be idiotic: upon seeing this, he became alarmed, brought water to throw in his face, and used other means to revive him; in which he at last succeeded. On again questioning him, he said that he did not know why he was there; that he was obliged to follow that man, though he did not know him, and after saying this, he fell down, and bruised his eye on the ground. In the mean time, the man was making off, but was apprehended, and brought to Hooghly. I then called in the barber; and this was his story: he met the boy on the road crying and looking stupid, and on asking him what ailed him he said that he had lost his way. Upon hearing this, he desired the boy to accompany him to the police station, and that a policeman would take him home. The strange nature of the transaction, whichever side was true, strongly arrested my

attention, and the trade of the man roused my suspicions; as I had heard that barbers in this country, while performing their tedious processes, could put people to sleep; and reports are rife, all over the country, of people having been obliged to follow persons who had charmed them; and the victims are said to be usually women. The barbers, all over the world, are a shrewd, observing race; their occupation brings them into close contact with the surfaces most sensitive to the mesmeric influence; and they are, therefore, very likely to have become possessed of the secret of Mesmerism at an early period, and perhaps it has descended to them as a mystery of their craft. I could only see two roads out of the dilemma: it was either a case of natural, or artificial somnambulism; and if the latter, how could it be brought about unless by Mesmerism? As accident had made me a witness in the case, I anticipated that I should be called upon to speak as to the possibility of such a mode of abduction; and as I was completely ignorant of the subject, I determined to make experiments, to satisfy myself. I thought it probable, that if this could be done by Mesmerism, I should perhaps be able to imitate it, as the greater power includes the less; and that I had only to stop short in the progress

to insensibility, in order to produce like effects, if obtainable by this means.

I therefore repaired to the Jail Hospital, and mesmerised a man; in whom I had subdued inflammation of the eye, by entrancing him several times; but only went to the extent of inducing the cataleptic tendency, and leaving him the power of moving and hearing, but very imperfectly. At this point, I led him away, and then letting him go, he stalked to the other end of the enclosure, till brought up by the wall; being turned, he walked in a straight line till some obstacle obstructed him, and then stood helplessly still. If allowed to stand motionless for some minutes, the trance deepened, and he became insensible to sounds; by blowing in his eyes, and addressing him all the time, he revived, and repeated after me, with great exactness, both English and Hindostanee: on awakening him, he had no recollection of any part of his proceedings, and said that he had never stirred from the spot, although he was at the opposite end of the enclosure from where we commenced. Being summoned to the Magistrate's Court as a witness, I was asked, "if I thought it practicable to carry off a person in the way described in the evidence?" I replied, that "I thought it pos-

sible, because I had just done something very like it, by making a prisoner follow me round the hospital enclosure, without his knowing it." The magistrate committed the case; but when it came to be tried before the judge, it was found to be utterly impossible to convey even a glimpse of my meaning to the minds of the native law officers who had to try the case; and the judge therefore asked me if I had any objection to show the Moulavies in court that it was possible for one person to make another follow him involuntarily, as I said. I answered, that I was willing to make the experiment, but would engage to do nothing: if he would order three men, whom I named, to be sent for to Court, I would try what could be done,—the men to be kept in total ignorance of our intentions.

In a day or two after, I was requested to attend the judge's court, which was crowded with Europeans and natives. Nazir Mahomed was brought in, and placed at the bar: I mesmerised him in a few minutes, and led him, with his arms catalepsed, out of the court, and set him walking down the road for some distance, making his arms rigid in any position, as long as I pleased. I then replaced him at the bar, where the judge and Moulavies all loudly addressed him, without

his paying any attention to them; and they were obliged to ask me to awake him. This I did, and on being asked from the bench, if he had left the room since he first entered it, he confidently answered, "No." While they were speaking to him in front, I approached, unperceived, behind, and entranced him on the spot, in the act of speaking. The words died on his lips, and he became insensible to all voices that addressed him: he was again awoke by blowing in his eyes. Màdub was put in the dock, and he did not see me on entering. The judge and Moulavies engaged him in conversation, and while he was speaking with animation and intelligence, I catalepsed him from behind, while in the usual praying attitude of a prisoner at the bar, and, in a moment, he ceased to speak or hear: I was told by those in front, that his lips moved as if in the act of speaking, after he ceased to be heard. He was so deeply affected that all motive power was nearly extinguished, and I had to push him from behind with my finger, to make him walk: he walked a few yards with difficulty, and then becoming suddenly rigid from head to foot, a slight push sent him down headlong upon the floor, in a most alarming manner: the fit of rigidity was so instantaneous that I was not

aware of it. He was revived with some difficulty, and fortunately was not injured by his fall.

Sooroop Chund was next brought in, and, as I had not seen him for a month, I began asking him about his health, &c., mesmerising him all the time. In a few minutes, he ceased to answer, and I took him out of the dock, turned him round like a teetotum, his arms rigidly fixed all the time, and then restored him to his former place in a state of complete insensibility: no one could make him hear, or show the slightest sign of life. When I blew in his eyes, he instantly recovered his senses, and declared he had never left the spot.

Whether the barber stole the boy mesmerically or not, I will not pretend to decide, but it gave me an opportunity of proving, in the most public manner, that the thing could be done, and no one has ventured to deny publicly that I stole the men; and, with the facilities of a native barber, I could almost engage to steal a man, woman, or child, daily. From the moment that I witnessed the extreme degrees of Mesmerism, I became deeply impressed with a conviction of its power for evil as well as good; and I have driven it thus far, in the hope of rousing the public mind to a sense of the dangers, as well as benefits, that

may be expected from it; and I trust the day is not distant, when public opinion will strongly condemn all those who practise the art, except for philosophic and medical purposes.

That the barber was in illegal possession of the boy's person, however obtained, was so clear, that he was sentenced to nine years' imprisonment, and labour in irons; and the sentence was confirmed by the superior court. But the government called for the proceedings, and thinking, I suppose, that the mesmeric experiments had made too deep an impression on the mind of the court, graciously pardoned the barber.

When puzzled by the unexpected exhibition of new and wonderful bodily, or mental phenomena, instead of solving our difficulties by denying the existence of the phenomena, or dismissing them contemptuously as the offspring of deception, or delusion, we shall do much better, and generally be nearer the truth, if we suspect that we have overlooked some power of the human constitution, and resolve diligently to betake ourselves to the study of the nature of the new agent. Like the careless knitter, we find, at the end of our work, that some stitches have been dropped, and that we must recommence our work *de novo*. By a comparison of the effects of

natural and mesmeric sleep on the human system, it will be seen, I think, that they only differ in degree, and in the greater command we have over the artificial than the natural state of sleep; and I feel disposed to think that extreme conditions of the nervous system, its exhaustion or repletion, and the irregular distribution of the nervous secretions, produce the same effects on the bodily and mental organs in normal and abnormal sleep.

I shall attempt to exemplify this, by instituting a comparison between natural sleep and its diseased varieties, and the mesmeric phenomena; from which it will be apparent that most of the latter exist in the routine of life, and that the novelty consists in our being able to produce and vary them, at will, by a new direction of the nervous energy.

Common Sleep.—In this condition of the system there is an absolute repose of body and mind; at least, there is no consciousness of movement in either, on awaking.

Mesmeric Sleep exactly resembles common sleep, with added restorative and curative power, of which the following cases are examples.

July 8th.—Geereah, a Hindoo girl; aged 10: is suffering from suppression of urine for two

days, in consequence of violence done to the perineum, by which the recto-vaginal septum has been destroyed: the bladder extends up to the navel, and no instrument can be passed, owing to the painful condition of the parts. I mesmerised her for half an hour, after which she slept an hour, and on waking voided her urine freely; all disagreeable symptoms immediately disappeared, and she was cured without a dose of medicine.

July 10th.—Oboychurn Roy, a Hindoo land-owner: had his left arm struck off, twelve days ago, in defending his house against a gang of *dacoits*. There are two white rings on his arm, made by ligatures applied to staunch the blood; and it is wonderful that mortification has not been produced. Several pieces of bone required to be removed, and this gave him great pain: he was mesmerised, locally, with great relief, and afterwards generally: he dropped asleep in half an hour, and slept the whole of that night; the only sleep he had had since the infliction of the injury.

2. *Night-mare.*—If the brain is disagreeably affected by internal physical impressions, such as an unequal distribution of blood, or nervous energy, then a confused train of painful images takes possession of the mind, which is filled with

causeless fears and shadowy horrors; and the sleeper struggles helplessly to shake off the incubus that oppresses him.

Mesmeric Day-mare. — This very much resembles *night-mare*, but with a greater tendency to walk and talk, and appears to depend upon the irregular distribution of the nervous power, and the consequent derangement of the respiration and circulation. This is so alarming an effect of Mesmerism, that I do not envy the amateur who may produce it.

July 4th.—Bunnoo, a Hindoo girl; aged 15. She sprained her ankle, ten days ago, by a fall: the foot, ankle, and half the leg, are much swollen, infiltrated, and very painful. I mesmerised her for an hour, but she only slept for a few minutes, and little relief was given.

July 5th.—She was again mesmerised to-day, and in ten minutes she became much agitated; her chest was convulsed, and she showed all the signs of a violent attack of hysteria. The convulsions were soothed in a short time, by generalising the mesmeric influence, and then she became delirious, crying out, that there was a man before her with great eyes, and desiring him to be taken away. Her eyes were wide open, but she said I was a Bengalee; thought she was in her own

house, and did not know her own, or her mother's name, who was standing by her. I placed her mother before her, whom she took for a man, and ordered away, covering him with the choicest flowers of Bengalee abuse. She was sitting up, and carefully protecting her leg all this time, answering all my questions about *it* quite clearly. As it was not in a comfortable position, I desired her to place it to her liking, as she would not allow it to be touched: this she did, and said it was now right. I then asked, if she would go to sleep: she answered "yes;" upon which I pointed my fingers at her eyes, and she fell back as if shot, and went into the trance.

The leg could now be freely pressed all over, without disturbing her, and I made my assistants apply their hands to it, to show them that the heat had also disappeared; the inflamed parts were now cooler than our hands.

This was not a case in which the mesmeric trance could rapidly subdue inflammation; it was of too long standing, and the ligaments had been too much injured, but local manipulations gave great relief, and induced sleep even.

Sleep-walking. — Sometimes from irritability of the muscular system, there is a craving for motion as the natural source of relief, and, volition sym-

pathising to the required degree only, the person gets up, and walks till tired: having thus exhausted the muscular and nervous irritation by exercise in the cool night air, he returns to bed, sleeps soundly, and, next day, has no recollection of his nocturnal promenade.

Mesmeric Sleep-walking. —July 18th. — I entranced five men to-day, in the presence of the Rev. Mr. Fisher, and Mr. Clint, Principal of Hooghly college: two of them awoke, on being pulled up, and set on their feet; the others slept standing.

No. 1. could not possibly open his eyes, though he understood my order to do so, and tried with all his might; nor could he walk when desired, but being set in motion, he poked helplessly forward, till he came in contact with the wall, against which he bowed his head, and then stood motionless. Being relieved from his dilemma, and set a-going again, he slouched about, a most forlorn-looking wretch, till he got embayed between a window shutter and the wall, and there he would have remained till the fit went off, if I had not taken pity on him.

No. 2. on being raised, and roused a little by rubbing, and blowing in his eyes, half opened them, and saw sufficiently to enable him to avoid

obstacles. Being ordered to walk, he stalked out of the room like a walking corpse; descended four steps, very cautiously, and continued his course in a straight line: when ordered to stop, he did so, and would never have moved again, of his own accord, till the unnatural state disappeared.

No. 3. being roused, opened his eyes wider than natural, but saw no better than the others. I think he even saw less, as he had to be warned of the steps, to prevent his falling: his pupils were dilated, and he never winked. Having got upon the grass, his actions portrayed the most helpless timidity: he walked as if upon glass, and stared intently at every tuft of grass in his way; sometimes turning aside to avoid what, to his disordered senses, probably appeared to be insurmountable obstacles. He turned, when ordered, and made towards the hospital again, picking his steps very cautiously, and never looking up till he came to the steps leading up to the verandah; he then stopped, looked up, carefully studied the nature of the impediment, and, seeing the mass of building before him, gave up the idea of ascending the steps as hopeless, and turned along the road running round the hospital, till he came to where we were standing. Here I

stopped him, and very distinctly told him the nature of the obstacle; four steps, namely, and desired him to come to me. This he understood, undertook, and accomplished; being assisted by my warning him at each of the steps, and counting them. All the men, as usual, were unconscious of having left the spot where they went to sleep.

Sleep-waking. — At other times, one or more senses remain active after the others have gone to rest; the wants of the waking organ are transmitted to the sensorium, and are followed by an effort of the will to gratify them. The sleeper rises, and performs the actions necessary to satisfy his desires; eye-sight, to a small extent, usually assists; if not, hearing and touch come to his aid, and guide him with singular accuracy in known localities. I may here give an illustration, from my own experience, of the preternatural acuteness of hearing, developed to aid the somnambulist in getting out of his troubles. In my youth, I was an eager sportsman, by flood and field; and one night, after a fatiguing day's sport, I found myself in the middle of the room, and very cold, but could not possibly contrive to get back to bed again. My last waking impression was made by the ticking of my watch under the pillow, and this recollection came to rescue me from my diffi-

culties. After the most mature reflection, it occurred to me, that if I could only detect my watch by its ticking, I should also find my bed. Acting upon this happy idea, I hunted my watch by ear, till I actually found it; and got into bed again, as the reward of sound reasoning and perseverance.

I may also here notice a similar instance which occurred to my brother, a clergyman in Scotland. I give it in his own words:—"Returning to London, after a tedious and dangerous voyage from the continent, I retired to bed shortly after reaching my hotel. I had taken possession of a spacious apartment, in which were two beds, of which only one was occupied. I soon fell asleep, as I thought, but in a short time left my bed, and wandered about in the greatest perplexity, under the idea that I was still on board the foreign steamer, which I had recently left. I went from berth to berth, as I conceived, beseeching all and sundry to show me my own berth. At last I came in contact with the empty bed, and creeping over it, got embayed between it and the wall. I was long of getting out of this new dilemma, and resuming my supplications to the numerous sleepers by whom I fancied myself surrounded. I remember well one part of the affair, which

filled me with the greatest trepidation. I came up to a small table, on which I distinctly heard a watch ticking. The idea came into my head that should the owner awake, and find me in such suspicious proximity to his watch, he would denounce me as a thief. I spoke long and eloquently, rebutting the base suspicion, but the sleeper remaining unmoved; I paced about in despair. I came to the door, but having locked it, it did not yield to my attempt at opening; but on coming to the window I drew up the blind, and was still more bewildered on seeing the mighty mass of London spread out before me. The light of the moon, however, striking on the watch, was at last the means of restoring me to the full use of my senses. It suddenly occurred to me that the watch was my own. I instantly seized it, and forthwith was wide awake. I was in the middle of the room, and in a cold sweat. A considerable time must have elapsed, during the occurrences above described, and the curious thing is, that my eyes were wide open the whole time. I spoke only French, and that with the greatest volubility."

Mesmeric Sleep-waking. — The following is a beautiful example of the same condition of mind, produced by art.

Mrs.———, an English lady, wished to be entranced, to have a tooth taken out by the dentist, who was shortly expected to arrive. I told her husband, that my labour would be in vain, if she thought advantage was going to be taken of her sleep; fear and anxiety being quite destructive to the production of coma; and suggested that when the dentist arrived, I should then propose to make a preliminary experiment, telling her, that if it succeeded she could then suit her convenience, and be entranced at any time, to have the tooth taken out.

The dentist came, and his arrival being carefully concealed from the lady, I proposed to test her powers of submission. At the end of half-an hour, her arms appearing cataleptic, I desired her husband to order the carriage, and go for the dentist. In a quarter of an hour they arrived, and I bent back the lady's head, and began to open her mouth without any attempt at resistance; but, on the window being thrown open to give the dentist light, she awoke with a sudden start, and said the dentist was present. She thus described her feelings: she very soon became unconscious, after feeling a general sense of warmth and oppression on the chest; she felt me raise her arms, and leave them in the air without the power to move

them, but did not hear me desire her husband to get the carriage ready. She heard the carriage wheels, however, and then it flashed across her brain that her husband had gone to bring the dentist, (although she firmly believed him to be in Calcutta,) and this conviction, from that minute, took complete possession of her mind. She greatly wished to call back her husband, or to get up and run, but she could not move tongue or foot, and showed all the time the most perfect repose of body and feature. She heard the carriage return, and knew it brought the dreaded dentist; was sure it was he who was speaking to her husband, and yet remained fixed to her seat, like a statue. In this instance, the sense of hearing was the only means of communication with the outward world, but it excited a former train of ideas; and how accurately did fear and causality come to a right conclusion, from the ear having transmitted a suspicious sound!

This case opened out to me the nature of Somnambulism, and taught me how to make somnambulists.

Dreaming of the Organs of Sentiment and Intellect. — Perhaps no demand is made on the organs of sense; but the waking parts of the brain are those connected with the passions, feelings, hopes,

and fears of the individual. The imagination becomes inflamed by sympathy with the excited organ, and the most vivid sensations of pain or pleasure, ecstacy and agony, are excited, according to the organ stimulated, and the control, more or less, of the reflecting power. The lover, the miser, the philanthropist, and the murderer; the man who hopes for coming good fortune, and he who lives in constant dread of coming evil; all enjoy, or torment, themselves to a height of pleasure, or horror, that cannot be felt when awake. If the reflecting organs are chiefly called into play, then the man of business does a stroke in trade, or conceives a capital speculation that might be of use to him, if he could recollect it when awake: the student easily conquers his difficulties; the mathematician solves a problem, and the historian removes a doubt; the poet's thoughts and lines no longer leave his brain like bird-lime, but he pours forth his soul "in thoughts that breathe, and words that burn." All good dreamers, in fact, confess that they think, say, and do better things when asleep than when awake. Or, let us suppose that the reflecting organs have been intensely engaged during the day, in considering our proper course of action in certain circumstances, and the probable consequences, or that a craving to pene-

trate the future has been the haunting idea; then the judgment, undisturbed by external impressions, and undistracted by passion, self-interest, and routine habits of thought, and supplied by memory only with the past experience and knowledge that bear upon the question; under these circumstances it is imaginable that the mind may jump to just conclusions, and receive a clear and happy glimpse into futurity. These impressions, when remembered on waking, and verified by subsequent events, are naturally converted into inspired dreams, and supernatural warnings, merely by the train of reasoning having been lost. The persons, in reality, have reasoned correctly, but by an unusual mode, whose processes have been forgotten; and have penetrated the future, only by comparing it with the past. In this way

> "Old experience may attain
> To something like prophetic strain."

And such dreams being remembered, and the reasoning analysed, may be of real use to us, in shaping the course of our present and future conduct, because our sleeping conclusions have been come to from just premises, and the natural process of connecting cause and effect: whether

this is done sleeping or waking, is of little consequence, the results being equally correct.

If the state of one's health has intensely occupied the thoughts, and the hope of being cured of some distressing complaint is the leading idea; then the man of medical and physical knowledge may possibly hit on the precise nature of his disease in dreaming, and prescribe for its cure in sleep better than he could have done by waking reflection; and, perhaps, the animal instinct of self-preservation may be concentrated on the case, and suggest a course of proceeding, the *rationale* of which we do not understand, but which yet may benefit the patient if acted upon; just as morbid longings, as we call them, (though frequently they are promptings of nature, and ought never to be despised by the physician,) often do the system good, when yielded to and gratified: this is called dreaming of what will do one good.

Mesmeric Dreaming of Different Organs. — As in natural sleep the organs are often preternaturally excited, and their powers singularly increased, by the concentration of the nervous energy upon them; so, in the mesmeric sleep, this may be effected, and of course to a greater and more wonderful extent, by the person being under the control of a reflecting and directing agent, instead

of being left to the fitful lights of his own imagination, and the short unsustained flights of his intellect, as in common dreaming. This power of acting on separate portions of the brain, and thereby inducing such trains of thought as we may be pleased to excite, will perhaps be found of practical utility in the treatment of mental diseases; the diseased haunting idea might be banished, and a more healthy tone of feeling and reasoning substituted and sustained, till a new and better habit of mind was produced. I see no reason to doubt that the mental organs can be isolated and exalted by the mesmeric influence under the direction of a skilful leader and suggester, and can readily believe that the mind, by this artificial stimulus, may be excited into more vigorous activity than when acted upon by the usual conditions of life. If persons may derive benefit from night thoughts in dreams, their sleep-waking day thoughts should be more valuable; but the one has no more pretensions to supernatural power than the other. The night-dream is woven out of past impressions lighted up by a flickering imagination and a wavering judgment; and the somnambulist has only the advantage of having his thoughts sustained and concentrated by his mental director. Nor, considering the excessive nervous delicacy deve-

loped in the course of mesmeric treatment, and the power of fixing the whole attention upon their bodily sensations, do I think it impossible that somnambulists may acquire an instinctive perception of the condition of their organs, and occasionally be able to prescribe something for their relief; just as persons dream, under nearly an analogous state, of what will do them good, and which sometimes really does so. My psychological experiments have been very limited, partly, because I feared to bewilder myself at the outset, and also from want of proper subjects to try them on. The mental range of my patients is so circumscribed, that the topics of food, drink, and clothing, almost exhaust it, and with most of them I have no common language. But I have done enough to show me how the higher grades of somnambulism may be reached; and with more highly organised and intellectual natures, I should have good hopes of doing so.

If properly set about, somnambulism may be produced at a very early stage of the mesmeric phasis, or can be developed as the first step in the return to life from the mesmeric trance; but in the latter case, the sleeper is apt to wake up, at once, to perfect consciousness. To make the simple somnambulist, it is only necessary to operate

on the person till his arms become cataleptic; all expression then vanishes, and even when the person answers on subjects of deep interest to himself, no sign of mental emotion ever disturbs his countenance. This statue-like serenity of features may be singularly broken by concentrating his attention, and desiring him to do whatever you do: he then becomes an imitative automaton, mimicking most servilely, and exactly, the actions and words of the mesmerist, or any one substituted for him, and who attracts his attention. Even at this stage, I have not established any "rapport" between the parties, but have only desired the person who took my place to call upon the somnambulist repeatedly by name, till he answered, and then to give clear and short orders, which were obeyed as readily as my own. There is much misapprehension prevalent, I am convinced, about the necessity of "rapport" in the physical and lower mental phenomena of Mesmerism: most of my experiments have been made on patients first entranced by my assistants, and my subsequent control over their movements was often acquired without touching them; it being only necessary for me to attract their exclusive attention.

July 29th. — I made a man senseless and cataleptic, at a great distance, in the presence of a

large number of gentlemen, who had come from Calcutta and elsewhere*; among them were six doctors, in whose hands, and in those of the rest of the company, he was left as long as they pleased, without my approaching till I was requested to awake him, after they had all tried in vain. This I did, but only to the extent of enabling him to walk and follow me. I then said, that I would try to clear up his perceptive organs sufficiently to permit him to understand my wishes, with which he would implicitly comply: I did not wish to leave him the power of speech even, at this stage. Having attracted his ear, I ordered him to do what I did, and this he very faithfully performed by

* I take the liberty to give the names of such gentlemen as I know, or who were introduced to me; not, however, as being all vouchers for the truth of Mesmerism, for I did not know many of them, and know not the effect produced on their minds by what they saw. There were upwards of 60 persons present, and some will be found, I hope, to put me right, if I misrepresent, or incorrectly report, what every one saw. Messrs. Barlow, and Tucker, Judges of the Sudder Court; Mr. Elliot, Law Commissioner; Mr. Hardinge, Capt. Hardinge, Mr. Melville, Mr. Larpent, Mr. Bayley, Mr. Wanchope, Mr. Jackson, Mr. Graves, Mr. Clermont, Mr. Betts, the Rev. H. Fisher, the Rev. F. Fisher, the Rev. Mr. Bradbury, Mr. Hunter, Mr. Bennett, Major Wood, Major Anderson, Major Riddell, Capt. Duncan, Capt. Cantley, Dr. MacPherson, Dr. Smith, Dr. Burt, Dr. Walker, Dr. Elton, Dr. Ross.

throwing himself, on the instant, into every attitude I assumed; but I required to be careful, for if I threw him much out of balance, he was in danger of plunging head foremost against the floor. Those who did not see him, may imagine how little the poor fellow knew what he was about, when they are told, that he took the "longitude" of the judges of the Supreme Court with the cool impudence and precision of a cabman, and the gravity of an astronomer. I then proceeded to free his voice, but only to the extent of making him my echo: he was told to repeat whatever I said, and he showed his intelligence by *repeating the order.* He then gave us "Ye Mariners of England," and if the pronunciation was not very perfect, he seemed to me to reverberate exactly my tones, and my gesticulations were also faithfully copied. We passed suddenly from "grave to gay," and he did such justice to "Hey diddle diddle," that I lost my gravity and burst into a laugh; he joined me in full chorus, and I heard it remarked "he can't help laughing himself;" and some were now quite satisfied that he was found out! upon this, I stopped laughing, and, on the instant, his features relapsed into the most awful repose, and I pointed out that it was no joke to him, but purely imitative laughter, and this, I should think,

became evident to all. He also sang "God save the Queen," as well, or rather as badly as I, for he is capable of much better things, under a more skilful music master. I now awoke him up a little more, and made him capable of answering questions: he was asked if he could fence; he said that he could; and I bid him show me. He began to cut the preliminary capers of the native fencers, but, in the act of stooping, a fit of rigidity shot through him, and he would have fallen with dangerous violence against the floor, if his fall had not been fortunately broken. I am always alarmed, and on the look out, when this man is experimented on, from this tendency to instantaneous rigidity of the body. A profound trance, from which it is very difficult to awake him, succeeds such exertions, and usually lasts for four or five hours. I showed another step in the mental phenomena, on other subjects; enabling them to answer simple questions correctly, and extinguishing and releasing the power at pleasure. All reflection being dormant, they feel a natural impulse to give a direct answer to a direct question, and in this way tell me frankly whatever I choose to ask. We are assured that common sleepers can also be played upon in the same way

by patient and skilful persons, and that this is well known to the secret police of France.

Catalepsy.—The following is a medical description of natural catalepsy, from the Cyclopædia of Practical Medicine. "The attack is generally instantaneous, the sudden rigidity of the trunk and limbs, the suspension of the senses, and temporary interruption of the exercise of the intellectual faculties, having been preceded by no premonitory stage. The patient retains the posture of body and the expression of countenance which he chanced to have at the moment of seizure; and by this combination of fixed attitude and unvarying expression, presents the air of a statue rather than of an animated being. The eyes continue either fixedly, or shut, as they happened to be at the commencement, whilst the pupil, though usually dilated, contracts on the approach of a strong light. The balance between the flexor and extensor muscles is so perfect, that any new position given to the head, trunk, or extremities, by an external force, is easily received, and steadily maintained. This passive energy of the muscular system, permitting the body to be moulded into almost as great a variety of attitudes as if it were a figure of wax or lead, is the distinguishing characteristic of the disease."

Mesmeric Catalepsy—Sept. 24th.—Mr. Blyth, curator of the Asiatic Society's Museum, paid me a visit yesterday, and saw various mesmeric operations in my hospitals. He begged so earnestly to be allowed to see a somnambulist that I was over-persuaded to gratify him, as I wished to confine myself to the purely medical relations of Mesmerism. I told him, that when the mesmeric influence, or rather disease, had been deeply felt by the constitution, any body could re-develop it very easily, and that if he would follow my directions, he might mesmerise a man for himself, and convert him into a somnambulist afterwards.

He accordingly rendered a man senseless, standing erect, in a few minutes, and failing to awake him, requested me to do so, which was instantaneously done. But, as often happens, when the system is deeply affected, he fell back into the trance, and Mr. B. begged to see the imitative stage of somnambulism. I said, he could do this also himself, by concentrating the patient's attention. Mr. B. was sitting on a table a few yards in front of the man, and made all kinds of noises, which he echoed back. Wishing to examine him more closely, Mr. B. jumped off the table, and came running forward with his body bent, and

singing. The man did exactly the same, but a sudden fit of rigidity passed through him, and he plunged head foremost against the floor, to Mr. B's great distress. I had him placed on a comfortable bed to sleep off the effects, and we left him at 1 o'clock P. M.

I was painfully startled to find the man as stiff as a log to-day, at 11 o'clock, and that he had shown no sign of life since we left him.

This would not have alarmed me without the accident, but I feared the head might have been injured by his fall, and set about restoring him to his senses by the usual mesmeric processes, but all in vain. I then had recourse to volatile stimulants to the nose (I could not induce any attempt to swallow), and effusion of cold water on the body, and to water poured from a height into his open eyes; but to no purpose. I returned in an hour, and renewed my efforts; no fluid could be got to pass down his throat, it ran out of his mouth as from a dead man's; while looking on attentively, I saw an instinctive effort made to clear the wind-pipe of mucus that obstructed it, and then an attempt to swallow; I took advantage of this, and poured some water down his throat; some, luckily for my purpose, passed into his

wind-pipe, and brought on a violent fit of spasmodic coughing. I continued to rouse the system at the same time, by every possible means, and succeeded in awaking him. But from the rigidity of the muscles of respiration continuing, his efforts to get rid of the water, and the accumulated mucus of twenty-four hours, nearly choked him. At length, the respiratory muscles resumed their natural action, and enabled him to eject the phlegm from his wind-pipe.

After the trunk had become pliable, his legs remained as rigid as bars of iron, and could not be bent for half an hour afterwards.

This will not only be a lesson to myself, but to others, I hope; and, in future, I must resist all application to do more than is necessary for the removal of disease, even at the expense of being thought uncourteous and disobliging.

Coma—"Last stage of all in this strange, eventful history," is only separated from the chamber of death by a very fine partition. In this, mind and body are equally torpid, and insensible to all external impressions. It is seen in persons exhausted by long watching and fatigue, exposure to cold, or intense suffering of body and mind; and in this condition of the nervous system surgical operations might often be performed with-

out causing pain. Irregularity in the vital organs, anguish and misery of the countenance, characterise natural coma, and indicate that the icy hand of death is arresting the currents of life, and, in general, the last trump alone can rouse the sleeper from this torpor of exhaustion.

Mesmeric Coma.—In this, the great organic functions are usually undisturbed; the countenance is calm and full, and the complexion that of health. The person is generally easily aroused, and how different is his waking! In an instant, often, he returns to full life and consciousness, without knowing that he has been asleep, and his feelings are often those of pleasure and relief; if he has lain down in pain, he often awakes free from it, and renovated in strength and spirits. In the subsequent part of this work, abundant instances will be given of this, and I will only here introduce one.

May 22nd.—I went to-day to see my patient Mr. Clermont, head master of Hooghly College; but found that he had gone out to his duty. Mrs. Clermont mentioned, that she was suffering from one of her nervous headaches, which commence with a pain in the back of the neck, that spreads over the scalp, and around the eye-brows; she has been weakly and nervous of late. She knew

nothing about Mesmerism, and I had never mentioned it to her, but now proposed to try the effect of it on her complaint. No objection being made, I requested her to turn her back to me, and sit erect in her chair, and describe anything uncommon she might feel during the process.

After a few minutes, she said that she felt a warmth in the neck, and on extending my manipulations, it advanced to the scalp and eyes. In about eight minutes, she said the pain was much less, and that she felt very drowsy: upon which, I asked, "shall I put you to sleep?" She only smiled in reply, raised her right arm, put her hand to the side of her head, and went to sleep. At this moment a lady (Mr. Clermont's sister), entered the room, and I begged her to remain by Mrs. Clermont till I returned with her husband. Having found him, I asked pardon for taking the liberty of mesmerising his wife without his consent, and requested him to return to see her awake. We found her as I had left her, with some members of the family looking on. I extended her arm at a right angle to her body, in which position, or any other, it remained fixed till moved again, and her sister-in-law pricked her hand unheeded. As I saw the party becoming uneasy, I awoke her,

but with considerable difficulty: she felt very much ashamed at having been found asleep by me, as she supposed, and it was only after long questioning and reflection that she recalled the circumstances attending her sleep. The headache was quite gone, and she felt, and looked, greatly refreshed.

Letter from Mr. Clermont.

"My dear Sir,

"I have read your report to the parties who were in the next room at the time you mesmerised Mrs. Clermont. They are perfectly satisfied as to its correctness, and have not the slightest objection to your making use of their names, if necessary. It would be superfluous to detail here the circumstances which came under my observation on my return from Judge Russell's, as they have already been described by you. But, in short, I fully corroborate your account of the case, and even bear the most positive testimony to all that transpired in my presence. You will be glad to learn, that Mrs. Clermont has been doing well ever since.

"I am,

"Your's faithfully,

"Chinsurah, May 25. 1845. "T. M. Clermont.

" P.S. I herein insert the names of the parties present: —

" Miss Clermont.

" Mr. Manly.

" Mr. Philipsz. } Students of the Medical
" Mr. Scott. } College."

Nov. 23.—Mrs. Clermont has not suffered any return of the headache, and no longer feels the distressing languor and oppression she complained of till she was mesmerised.

Natural Clairvoyance.—This is recorded to have been seen in cases of natural catalepsy, and a French physician, M. Petetin, has related several instances of it, which are as well attested as most facts in the history of medicine. M. Petetin had opposed Mesmerism, when alive, and the cases of catalepsy, in which he had observed a transference of the senses, were found among his posthumous papers, and published after his death. In his first case, the discovery was purely accidental: a cataleptic patient was seized with an uncontrollable impulse to sing, which nothing could stop, as she was completely deaf and insensible to external impressions on the organs of sense.

M. Petetin fell by accident across the bed,

and when his mouth was near the patient's stomach, exclaimed in despair, "Good God! what a pity that this woman can't be stopped singing!" This exclamation the woman heard, and answered, to his great amazement, and they continued to converse through the pit of her stomach, and the functions of other senses were also performed by remote parts of the body. All this is supported by unexceptionable authority; such as one cannot reject, and hope to be himself believed.

It has also been seen and described by unprofessional persons of intelligence and veracity; of which the following is a curious example: it is a communication from a clergyman to Sir George McKenzie, President of the Edinburgh Phrenological Society, and was written without any reference to Mesmerism, and before it had attracted any attention in England:—

"Dear Sir,

"It is perfectly true, that our poor friend, who has now been some months with us, presents one of those singular and almost incredible cases of hysterical or nervous affection, which are at distant intervals witnessed under the dispensation of the Almighty. The overthrow of the regular

functions of the nervous system was occasioned by the almost sudden death of her father (to whom she was fondly attached), who was seized with illness, during her absence from him, and died in a few hours after she returned to her home. I cannot enter into any longer details of the case, which has been attended with all those varieties, which have long characterised the complaint among medical men as the Protean disorder. The extraordinary powers communicated to the other senses by the temporary suspension of one or two of them, are beyond credibility to all those who do not witness it: and I really seldom enter into any of the details, because it would be but reasonable, that those who have not seen should doubt the reality of them.

"All colours she can distinguish with the greatest correctness by night or by day, whether presented to her on cloth, silk, muslin, wax, or even glass; and this I may safely say, as easily on any part of the body as with the hands, although, of course, the ordinary routine of such an exhibition of power takes place with the hands, — the other being that of mere curiosity. Her delicacy of mind, and high tone of religious feeling, are such, that she has the greatest objection to make that which she regards in the light of a heavy affliction

from God, a matter of show or curiosity to others, although to ourselves, of course, all these unusual extravagances of nervous sensibility are manifest, for at least twelve out of every twenty-four hours. She can not only read with the greatest rapidity any writing that is legible to us, music, &c., with the mere passing of her fingers over it, whether in a dark or light room, (for her sight is for the most part suspended, when under the influence of the attack, or paroxysm, although she is perfectly sensible, — nay, more acute and clever than in her natural state;) but within this month past she has been able to collect the contents of any printing or MS., by merely laying her hand on the page, without tracing the lines or letters; and I saw her, last night only, declare the contents of a note just brought into the room, in this way, (when I could not decipher it myself, without a candle) and with a rapidity with which I could not have read it by daylight. I have seen her develop hand-writing by the application of a note to the back of her hand, neck, or foot; and she can do it at any time. There is nothing unnatural in this, for, of course, the nervous susceptibility extends all over the surface of the body, but use and habit cause us to limit its power more to the

fingers. Many, even medical men, take upon themselves to declare, that we are all, her medical attendants as well, under a mere delusion. We ask none to believe any thing, if they prefer not to do so, and only reply,—The case is equally marvellous either way; either that this our poor patient should be thus afflicted, or that eighteen or nineteen persons of my family and friends, in the daily habit of seeing her, should fancy she is, for every twelve hours out of the twenty-four, doing at intervals that which she is not doing. There are many exhibitions of extravagant powers which she possesses, that we talk of to no one; for finding it difficult to acquire credit for lesser things, we do not venture on the greater. Her power ceases the moment the attack passes off. A considerable swelling has at times been visible at the back of the head, which has yielded to the treatment. It is certainly a case which would be an instructive one, in the consideration of the physiology of the human frame: but she, poor thing! is most averse to experiments being purposely made on her; but in her every day life among us, we have no lack of proof for all we believe and know.

"Between the attacks, she is as perfectly in a natural state as ever she was in her life. There

is but one paradox in her state; and that is, that she can, at such times, hear some sounds, and not others, though very much louder, and see some things, and not others, though placed before her. She could hear a tune whistled, when she could not hear a gun fired close to her. It is certainly the absorption or absence of mind that occasions this; absent to some things, though present to others, like any absent man; and thus Dr. Y. accounts for it. In making this communication to you, in part to vindicate the testimony of my friend, Mr. M., I have really exceeded my usual custom and resolution; for I do not think it fair to the poor sufferer herself, to make her too much the talk of others. Very few believe what we tell them, and therefore we are in no degree anxious to open our lips on the subject. All I know is, that I should not have believed it myself, had I been only told it. I must beg, that you will not make any undue use of this communication, by handing my letter about to any one. The friend for whom you ask the information is perfectly welcome to read it, or I should not have written it. If the case were my own, the world should be welcome to it; but a young female of such sensibility might be much embarrassed by finding the world at large in

possession of all particulars on her recovery, should God so please to permit.

"I am, &c. &c.

"_____"

Mesmeric Clairvoyance.—If the above are *facts* (and it is no sign of credulity to believe them till they are refuted, which has never been done, I believe,) I think it extremely probable that art, having copied nature so far, can also imitate her in this; and that clairvoyance has actually been produced in the derangement of the nervous system caused by Mesmerism. It has not yet occurred in my experience, but I should not be at all surprised to encounter it. A gentleman who saw me amputate a tumour, 28lbs. weight, the other day, and cut and rudely handle the most delicate parts of the human body for twenty minutes without the patient showing a sign of life, said at the conclusion, "Well! I have learned one thing to day, and that is—never to be again *positive* about anything: I did not believe a word of it, and am now completely convinced of its truth;" and those who wish to know the truth about Mesmerism will do well to follow his example.

It would be more prudent perhaps to continue my facts, and plead ignorance of the *modus operandi* of this mysterious agent; but it is impossible not

to think, though perhaps little to the purpose. By turning it all round we may chance to make a happy hit, perhaps; but nothing can be gained by indulging only in thoughtless wonder: I shall, therefore, venture to put down what has occurred to me about it.

The exhaustion of any particular organ, the eye for instance, and the consequent derangement of the nervous system; the shock given to the nervous centres by sudden mental emotions, or the effect produced on the imagination by a powerful mind acting on a weaker; have all been said, and truly, to simulate the mesmeric symptons, and therefore "imagination" has very generally got the credit of being the "primum mobile" in these singular affections of the system; and I do not intend to dispute its power, or the reality of the effects produced by this agency. But my profound impression is, that the first effects produced on my patients by my mode of practising Mesmerism, are of a purely physical nature; an influence exerted by one animal over another, under certain circumstances and conditions of their respective systems. I should as soon adopt the "opium diabolical," or "all humbug theory," as a satisfactory solution of the problem, as attempt by the action of the imagination to account for what I have seen and done.

Would the most imaginative of my readers ever think of the following process as a likely means to make people insensible to fire and steel, by the effect produced on the imagination? A Bengal cooly, or pariah, comes before me for the first time, and I see he has a disease requiring a surgical operation; I never say a word to him, but desire my assistants to take him to another room and mesmerise him. They desire him to lie down, shut his eyes, and try to sleep, and they pass their hands slowly over the most sensitive parts of the body; exhaling their breath upon the patient, and loading him with their sweat, if he does not readily yield to the mesmeric influence. A few minutes of this will sometimes suffice, but more generally it takes hours, and relays of mesmerisers; and a less imaginative process I cannot imagine. Calomel, rhubarb, and castor oil, have all the same effects, and it seems to me, that it would be as reasonable to say they were *therefore* all the same thing, as to declare the effects of the above process to be "all imagination." "Well! there is *one* thing certain, and that is, that imagination has nothing to do with this," is the common remark of gentlemen who have witnessed the cause and effect, and whose senses are not stuffed by prejudice. That it mingles inexplicably, and

inextricably, with the true mesmeric influence, after the constitution has taken on the diseased action deeply, is well known, and will be abundantly shown afterwards; but I now speak of *first effects*, on which alone I desire to insist, in leading proof of the reality and nature of Mesmerism. One person induces mesmeric symptoms by deranging the nervous equilibrium, through a commotion of the mind, another by means of squinting, a third by monotony of sensation, &c.; the same effects being produced by different processes, as we see on many other occasions. It is too common for persons engaged in the same pursuit to become exclusively addicted to their *own way* of gaining their object, and when a new path is open they attempt to obstruct it as an infringement of their exclusive right of way. "Your way is not my way, and therefore it is wrong," argues self-love; and the public seeing so many travellers pretending to reach the same destination, each by his particular route, and every one proclaiming *his* to be the only true road; the impatient public, with its usual slashing logic, sets them all down as wrong, and declares them to be chasing a delusion. Whereas, very often, they are all right, and only wrong by taking too limited a view of the subject: the combined observations of all will

probably bring us near the truth, and each plan will be found a useful resource, in different circumstances.

It seems to me that irregularity in the distribution of the nervous energy is at the bottom of all the mesmeric symptoms, however produced, whether naturally or artificially; and I suspect that the same effects may follow a state of exhaustion or repletion of the nervous system. If I might venture on so material an illustration, I should say that the first effects produced in the system by Mesmerism may be likened to a river rolled back upon its source by a heavier body of water, stagnating in its channel, and unable to resume its usual course, till the opposing tide subsides.

From all I have seen, I cannot but believe, that there is an influence of some kind that passes from one person into another, when one of two persons is mesmerised in the way I have described; that, in fact, there is a virtual transfusion of some vital agent from the one body into the other. The wonderful subtlety as well as the effects of this power, lead us to suspect that it is a nervous product; and may it not be the nervous energy passing off by the organs of sense, and even for a short time going beyond the surface of the body; the lungs, meanwhile, and periphery of the body,

retaining their vital properties, and remaining under the direction of the will? Every time we move a finger, it is by transmitting *something* under the control of the will to the ends of the fingers, and why should it not go farther? Supposing this to be possible, and that this nervous emanation can be directed by one person upon another, then I would venture to conjecture, that, being a nervous product, it is accepted by the nerves of sense, on coming into contact with them in a continuous well-sustained stream, and is transmitted by them to the brain, thereby adding to rather than subtracting from, the nervous secretions of the brain, which it is their duty to carry off as soon as formed. If the sensorial secretions are not conveyed away by the nerves of sense and volition, and the exercise of the perceptive and intellectual organs, the brain becomes torpid and oppressed. In like manner, the transmission of foreign nervous matter might overwhelm the brain, or a mere stoppage of its own fluids might steep it in a sleepy drench, and the functions of the sensorium would not be restored until the usual outlet for its energies were re-established.

The entireness of the organic functions would seem to countenance the idea, that the external influence is propagated to the brain by the nerves

of sense: the general and capillary circulation, the respiration, and temperature, often remain tranquil, and natural, as in sleep; which shows that organic life is little affected. The accumulation of nervous fluid that oppresses the brain, is also seen in the singular condition of the muscular system, and may perhaps explain the strange helplessness, and at the same time the wonderful passive power of resistance in the muscles, which enables cataleptics to stand asleep in the most painful and exhausting attitudes, longer than would wear out the strongest and most practised athletæ, who enjoy all the resources of art and training. The absorption of another's nervous emanations being thought possible, and this abnormal susceptibility being once established, it is possible to conceive the extreme degree to which this required habit, of transmitting extraneous nervous fluids to the brain, may be developed; and we can comprehend the delicate impressions that would be made by so subtile an agent on such fine conductors as the nerves of sense; nor, on such a supposition, should it surprise us to be told, that the subject receives at the same time some impressions of the individuality of the agent, and manifests a certain degree of submission to his *will* even. The

shades of such an interchange of vitality would be infinite, and probably resemble the effects which we are told can actually be produced by the mere will of the mesmeriser on his patient. I suspect, however, that considerable error exists regarding the power of the *will* in producing the *physical* mesmeric phenomena. People are *willed* to sleep, I believe, by directing our nervous influence upon them, and simply making them the objects of our attention, which is sufficient to impel this influence against them, and, if they have become extremely sensitive to the impression, the usual specific effects will ensue, and they appear to go to sleep in obedience to our will that they should. I have tested this in a variety of ways, by desiring Hindoos, Mussulmans, and Europeans of all professions, merely to concentrate their attention upon certain highly sensitive patients; and the results were as striking and certain as if the most energetic will had been directed against them. On one memorable, and ludicrous occasion, I induced a learned brother (who came purposely to expose the "humbug") to give me the command of his person for a short time. The result was, I forced him, *against his will*, and "in spite of his teeth," to produce all

the mesmeric symptoms, from the quivering of an eyelid, to the most intense coma, in subjects of morbid sensitiveness, in whom the tendency to mesmeric action had become a deep-rooted disease. The will is no doubt very influential in producing first effects by giving continuity and intensity to our influence, but the system having been once deeply affected, the simple act of attention, on the part of any one, seems to be quite sufficient to bring it within his nervous atmosphere and influence.

But I wish it to be understood, that I speak only of the physical and inferior mental phenomena, such as I have described; of the higher mental manifestations I have no personal knowledge, and to produce them, mental sympathy will no doubt be indispensable. That the nervous sensibility has retreated from the surface, and the organs of sense, is evident to all observers, by the universal insensibility; and the condition of the brain, and muscular system, would seem to indicate that they labour under the effects of this revulsion. The means used to demesmerise particular organs, and the brain itself, appear to act by determining the nervous currents back to the surface, thereby relieving the deeper organs from the load that oppressed them; at least I cannot

account for the following singular exhibition in any other way.

Nov. 16th. In the presence of Mr. S. Palmer, Major Smith, Mr. Stopford, and Dr. Scott, I showed the spontaneous development of the mesmeric disease (for such it becomes, if pushed far) in a man who became entranced to the most intense degree, by being merely brought into my presence: every one was left to test his condition, in his own way, and no one doubted the *reality* of his condition. I at last awoke him for them, and carrying him to the end of the room, placed him erect against the wall; in a few minutes he relapsed into the trance, and I catalepsed him in the attitude of St. Andrew on the cross. I then mesmerised another man, only, however, to the extent of sealing his eyes, and inducing the cataleptic tendency in the muscles: having set him walking, I extended his arms horizontally, and directed him against the man crucified on the wall. On coming into contact with him, he stopped, and I urged him on, asking "what stopped him?" He tried in vain to separate his eyelids, in order that he might see the nature of the obstruction, and, having no use of his hands, he thought of helping himself by rubbing his forehead against the object before him: this I stopped by pulling

back his head, and it remained stiffened in the position I left it. He was now reduced to utter helplessness, as his feet struck nothing but the wall below: I then blew on his neck, thereby immediately releasing it, and on being again urged to tell what was in his way, he began rubbing his forehead against the man, as before. One arm was next freed in the same way; this he brought into play; then the other, and he used both in feeling and rubbing the man all over, with the greatest earnestness, but without a vestige of expression in his countenance. At length, he said there was a man before him. I also showed, that my breath had no specific effect by doing the same thing with a fan; a current of air being all that was required to dissolve the rigidity of the muscles.

Blowing in the eyes is also the most expeditious way of relieving the brain, and restoring its functions; rubbing the eyes, and pouring water from a height are also efficacious, and sometimes are all needed to de-mesmerise the brain. Air, cold, and friction, are natural stimuli to the skin, and the most likely means to restore its sensibility, if diminished; and I imagine that they relax the muscles by determining again to the surface the nervous currents, which had been thrown

back upon the muscular system, and produced its cataleptic condition. I cannot otherwise account for the following singular effects of cold, which, from my patients being naked, I can apply in any way I please. On several occasions, I have entranced persons standing, stript them naked, and catalepsed them in the most painful postures imaginable; and in these they would remain an incredible length of time; but let a little cold water be squirted from a distance on any member, and it became instantly relaxed. If both arms were fixed perpendicularly in the air, one after the other was shot down instantly, by a slight stream of water; and if it was directed to the calf of the leg, the person fell, as if he had been hamstrung: or if the body was catalepsed, out of the perpendicular, squirting water on the loins would send the patient head foremost against the ground. Blowing on, or rubbing any part had the same effect, but the general torpor is often too deep to exhibit these sensibilities, and such persons are awoke with great difficulty, by the use of all the de-mesmerising agents.

The respiratory nerves of the face are more particularly sensitive to the impressions of air, cold, and friction; indeed the shock given to a somnambulist by blowing in his face simply,

often resembles the effects of an actual blow, and is sufficient to awake him: how, I cannot possibly imagine, unless it be by acting as a relief to the brain, by restoring its secretions to their natural channels.

Having followed, and imitated, nature so far, in producing different symptoms according to the extent of the nervous derangement we induce, I see nothing more wonderful in the mesmeric phenomena than in the disturbances that occur in the atmosphere, when the electric relations of the earth and air are changed, and the equilibrium for a time destroyed; but we need not, I suspect, seek for this marvellous agent among the great inorganic powers of nature; for if they are employed, they are so altered and endowed with new vital qualities, by being subjected to the principle of life, that they are no longer recognizable after being converted from their control of brute matter, to be the directing powers of animal life; and I fear the secret lies too near the sources of life and death for man to be permitted to approach it very nearly.

That an agent capable of affecting the physical condition of the brain to such a degree, should have no influence on it as the organ of thought, appears, at first sight, extremely improbable, and

we might reasonably expect the production of singular and abnormal mental phenomena, when the influence was directed so as to act principally upon the intellectual organs. Like wine and opium, the extreme degree of the mesmeric influence torpifies the brain, but in smaller quantities, it is a bodily and mental stimulus, and if it be possible to transfuse our cerebral fluid into the brain of another, I see no absurdity in supposing that it may be stamped with our individuality, and may, for a time, induce a synchrony of action between the brains of the giver and the recipient.

But, beyond the simpler manifestations of somnambulism, all is so dark, that to stop short, and wait for farther evidence, is better than to advance and step in the dark. The ignorance and presumption of man; his passion for the mysterious and marvellous, his powers of self-delusion, with the pranks of knaves and the simplicity of fools, have so mystified the subject, that the artificial difficulties cost us more trouble to remove than the natural; and a mass of rubbish must be removed before we can reach the foundation stone of truth.

CHAP. V.

The Mesmeric Processes. — Publicity the best Security to the Public. — Ignorance and Indifference the real Dangers.— Mesmeric Treatment of Disease a Field for the Philanthropist. — Puysegur and Deleuze, unprofessional Men.— Processes for producing Coma. — Tumour in Upper Jaw removed during Coma.— Hypertrophy of Scrotum, ditto. — Trance renewable at Pleasure. — Three consecutive Operations on one Person. — Mode of Mesmerising in Chronic Diseases.— Cure of Rheumatism and Nervousness.— Local Mesmerising. — Mesmerised Water. — Process for preparing it. — First Experiments with it. — The last.—Means of awaking Persons Mesmerised.

At the commencement of my mesmeric experiments, I had resolved to communicate only to professional men the modes which I had found most effectual in educing the influences of Mesmerism. I was, at first, alarmed at the possible dangers to the public, were the most effectual means of producing the extreme degrees of Mesmerism generally known; but I am now of opinion that the greatest danger to a community is a contemptuous disregard of an unseen and unknown enemy, and, therefore, all I know on

this important subject shall be revealed. The best means of avoiding danger is to know its full extent, and, sometimes, the best policy is to meet it half way, fully prepared to repel it. While the public remain in a listless indifferent humour about Mesmerism, the dangers from an abuse of it are very likely,—I may say are very certain—to occur. But when, by attending to the following directions, proofs of its truth shall pour in from every quarter, then Mesmerism will come home to men's minds as a reality, and become an object of personal interest to all; and the instinct of self-preservation will rouse people to take the necessary steps for deriving all the benefit, and avoiding all the danger attending its practice. If evil arises, let the blame rest on the culpable negligence of the public, and the punishment fall on those who pervert good to evil.

The utmost publicity is most consonant to my taste, and, upon the whole, the best security to the public.

Many benevolent and honourable unprofessional persons may also be induced to exercise their natural gifts, in the alleviation of human suffering, under the superintendence of the physician, who cannot spare the time, and waste of body, which are required before his patients can

be benefited by the processes of Mesmerism. The persons to whom Europe owes its knowledge of Mesmerism, uncontaminated by self-interest and the devices of quackery, were unprofessional men, the Baron Puysegur and M. Deleuze; the one a wealthy French nobleman, who consecrated his life to relieving the sufferings of the poor, and who said it was his mission to lodge Mesmerism in the hands of the doctors (a trust they have been very neglectful of, unfortunately); and the other, a truthful and benevolent man of letters, long keeper of the "*Jardin des Plantes*," at Paris, who practised the art for thirty-five years, and whose works are most honest and true guides; errors of judgment, to which all are subject, being their only defects; as I have tested by experience, before reading them.

Coma — I usually procure in the following manner, and am inclined to think that its comparative rarity in Europe is owing to the mesmeric influence not being at once sufficiently concentrated on the patient, by transmitting it to his brain from all the organs of the operator, and through every channel by which it can be communicated. With the necessary degree of patience, and sustained attention, the following process is so effectual in producing coma, that in

a large enough field, and with properly instructed assistants, it may here be obtained daily, for the purpose of procuring insensibility to surgical operations. No trial under an hour should be reckoned a fair one: two hours are better; and the most perfect success will often follow frequent failures, but insensibility is sometimes induced in a few minutes.

Desire the patient to lie down, and compose himself to sleep, taking care, if you wish to operate, that he does not know your intention: this object may be gained by saying it is only a trial; for fear and expectation are destructive to the physical impression required. Bring the crown of the patient's head to the end of the bed, and seat yourself so as to be able to bring your face into contact with his, and extend your hands to the pit of the stomach, when it is wished; make the room dark, enjoin quiet, and then shutting your patient's eyes, begin to pass both your hands, in the shape of claws, slowly, within an inch of the surface, from the back of the head to the pit of the stomach; dwelling for several minutes over the eyes, nose, and mouth, and then passing down each side of the neck, go downwards to the pit of the stomach, keeping your hands suspended there for some time. Repeat this process steadily for

a quarter of an hour, breathing gently on the head and eyes all the time. The longitudinal passes may then be advantageously terminated, by placing both hands gently, but firmly, on the pit of the stomach and sides;—the perspiration and saliva seem also to aid the effect on the system.

It is better not to test the patient's condition by speaking to him, but by gently trying if the cataleptic tendency exists in the arms. If the arms remain fixed in any position they are left in, and require some force to move them out of every new position, the process has been successful; the patient may soon after be called upon by name, and pricked, and if he does not awake, the operation may be proceeded with. It is impossible to say to what precise extent the insensibility will befriend us: the trance is sometimes completely broken by the knife, but it can occasionally be reproduced by continuing the process, and then the sleeper remembers nothing; he has only been disturbed by a night-mare, of which on waking he retains no recollection. Here is an instance of this.

July 29th.—In the presence of some sixty gentlemen, who came from Calcutta and the vicinity, I to-day cut off an enlarged and ulcerated

prepuce; the man moved, and cried out, before I had finished, but was immediately thrown back into the trance, from which all the efforts of the spectators, six doctors included, could not arouse him, or excite a sign of vitality. He was operated on, at twelve o'clock, and awoke at three: on being questioned, he said, that he had felt no pain, and had not seen an European that day. Next day, he complained of the pricks of pins, inflicted upon him by my visitors, who had actually made a pincushion of him. In future, I must request that pins be left at the door.

The person can be raised into any position required for the operation; but some peculiarity in the case may demand the sitting posture from the commencement, as in the following instance.

June 3d.—Teencowrie Paulit, a peasant, aged forty. Two years ago, he began to suffer from a tumour in the antrum maxillare; the tumour has pushed up the orbit of the eye, filled up the nose, passed into the throat, and caused an enlargement of the glands of the neck.

I was very desirous to reduce him to a state of insensibility before operating on him, and for the last fortnight my assistants have all perseveringly tried it, but without inducing sleep even. Indeed, from the tumour obstructing his throat, he has

hardly slept for five months. Having ascertained that he was easier when sitting, I took him in hand myself, to-day, and entranced him in a chair by the following process. The room being darkened, I suspended my spread hands over his head for some time, and then carried them slowly down, one in front, the other behind; the former dwelling over the eyes, nose, mouth, and sides of the neck, and the latter being applied over the base of the brain: both were then carried down the centre of the body, claw-like, to the pit of the stomach, where they were spread and gently pressed, one opposite the other; and I kept breathing on the head and eyes all the time. In half an hour, the man was catalepsed, and in a quarter more, I performed one of the most severe and protracted operations in surgery; the man was totally unconscious.

I put a long knife in at the corner of his mouth, and brought the point out over the cheek-bone, dividing the parts between; from this, I pushed it through the skin at the inner corner of the eye, and dissected the cheek back to the nose. The pressure of the tumour had caused the absorption of the anterior wall of the antrum, and on pressing my fingers between it and the bones, it burst, and a shocking gush of blood, and brain-like matter,

followed. The tumour extended as far my fingers could reach under the orbit and cheek-bone, and passed into the gullet — having destroyed the bones and partition of the nose. No one touched the man, and I turned his head into any position I desired, without resistance, and there it remained till I wished to move it again: when the blood accumulated, I bent his head forward, and it ran from his mouth as if from a leaden spout. The man never moved, nor showed any signs of life, except an occasional indistinct moan; but when I threw back his head, and passed my fingers into his throat to detach the mass in that direction, the stream of blood was directed into his wind-pipe, and some instinctive effort became necessary for existence; he therefore coughed, and leaned forward, to get rid of the blood; and I supposed that he then awoke. The operation was by this time finished, and he was laid on the floor to have his face sewed up, and while this was doing, he for the first time opened his eyes.

June 4th. — This is even a more wonderful affair than I supposed yesterday. The man declares by the most emphatic pantomime, that he felt no pain while in the chair, and that when he awoke, I was engaged in sewing up his face, on the floor; — so that the coughing and forward

movement to get rid of the blood, were involuntary, instinctive efforts, to prevent suffocation.

June 6th.—The dressings were undone to-day, and the whole extent of the wounds in the face has united completely by the first intention. He is out of all danger, and can speak plainly: he declares most positively, that he knew nothing that had been done to him till he awoke on the floor, and found me sewing up his cheek;—and I presume he knows best. Here is a translation of his own statement in Bengalee:—

"For two years I laboured under this disease, and scarcely slept for five months. On the 19th May, I came to the Imambarah Hospital, and three or four persons tried to make me sleep, but all in vain. On the 3d June Dr. Esdaile having kindly undertaken my cure, with a great deal of labour, made me sleep, and took something out of my left cheek, which at that time I did not perceive. After the operation, I did not sleep for two nights, but after the third day, I have slept as usual.

"Teencowrie Paulit,
of Madra."

If patients are fortunate enough to sleep some time after the operation, they not only feel no pain on waking, but none subsequently even. The following is an extraordinary instance of the absence of pain, from first to last.

Sept. 1st.—Teg Ali Khan, a tall strong-looking man; has a hypertrophied scrotum, caused by repeated operations for hydrocele by native doctors; who only withdraw the water as often as it accumulates, without attempting the radical cure. The tumour is perfectly round, and as big as a man's head. He was mesmerised in two hours, on the first trial, and, in the presence of Drs. Ross and Sissmore, I dissected out all the parts; which was very tedious, from the testes having contracted adhesions all round them; and it was about half an hour before the organs were covered up again by stitching flaps over them. Not a quiver of the flesh was visible all this time, and at the end, his body was as stiff as a log, from head to foot, and his separated legs could be with difficulty put together again. He awoke in half an hour after the operation, and felt no pain.

Sept. 4th.—The stitches were taken out to-day; the wound has healed throughout, and he has had *no pain whatever* since the operation;—so much

for the absence of the usual irritative shock to the system.

We can renew the trance at pleasure, in order to render people insensible to repeated operations.

Sept. 18th.—Morally Dass, a peasant, aged fifty, has an unhealthy cartilaginous sore, half an inch high above the skin, and extending for six inches along the outer ham-string of the left leg, which it has contracted to nearly a right angle with the thigh, for a year past.

He was entranced to-day, for the first time, and I deeply cauterised the whole sore with a red-hot plaister iron, without awaking him.

Sept 19th. — The excrescence is so hard, and thick, that it must be dissected off the ham-string: he was again entranced, and the diseased part was pared down to a level with the surrounding skin, without his feeling it.

Sept. 20th.—When he was in the trance to-day I straightened the leg completely, and bound it up in splints: he awoke not, and when he did, had no pain; although it took all my strength and weight to break down the adhesions, which I felt and heard cracking under my hands. The Rev. Mr. Bradbury saw the first operation. The Rev. Mr. Fisher, and Mr. Graves, the second

and Mr. Blyth the third. In the treatment of chronic diseases suited for Mesmerism, *coma* is not required: if it occurs, it is probably because nature needs it; but we ought to be satisfied with the improvement of the patient, though it is unaccompanied with any striking phenomena. The system is not less effectually recruited, because it is done silently,—just as the best digestion is least felt. For refreshing the nervous system, and inducing natural sleep, mesmerising "*à longs courants*," as the French call it, will be found sufficient. These are steady continuous tractions, with the points of the spread fingers, from head to foot; the head may be occasionally breathed upon, and the hands allowed to rest for a few minutes on the pit of the stomach. An hour of this, on going to bed, will often soothe restlessness, bring back natural sleep, and invigorate the nervous system.

Sept. 25th.—Mr. Calder (I mention his name at his own request), who has been twenty years in India, came to me to-day, complaining of general rheumatism, nervousness, and debility. He walks with great difficulty, with the help of a stick, and cannot ascend a stair. His nerves are shattered, his eye-sight is weak, and his hands tremble when writing; when he walks on smooth ground, he

fancies that it slips from below him, and the effort made to save himself nearly throws him down: of late he has not been able to drive his buggy, from a feeling that it is impossible for him to prevent his horse from running into any carriage he meets. He has been in this state for two years and a half; during which he has gone a tour of doctors, and swallowed a dispensary of physic, to no good purpose. I said that I could not in conscience physic him more, but recommended him to try what nature would do for him, as, upon the whole, I thought his case adapted for mesmeric treatment, but that it would require time and patience to do him any good. He was very glad of any untried chance of relief, and I desired one of my people to mesmerise him for an hour in bed, every night.

Never having been present when Mr. Calder was mesmerised, I am indebted to him for the following notes of his case.

"On the 25th of September last, your native assistants, as directed by you, made the first attempt to induce the mesmeric sleep, but without success: the trial lasted for an hour and a half.

"26th and 27th September, ditto.

"28th.—After a persevering trial for the same length of time, I was thrown into a trance, from

which I awoke after upwards of five hours,—I found great difficulty in raising my eyelids, or keeping my eyes open. I left the couch and retired to bed, and had my natural sleep afterwards, till six o'clock next morning. For a week afterwards, the efforts to mesmerise me were repeated for an hour daily, but without farther effect than causing a sleep of a few minutes. I however continued to enjoy my natural rest at night, found my pains abating daily, and my nerves considerably braced up; so much so, that I could walk up and down stairs without assistance, and with every confidence drive out in a buggy alone, which I could not have attempted for two years and a half previously.

"Up to the 17th of Oct. I was thrown into a sleep, every third or fourth night, for about two hours; the effect of which you may judge of, from my being able to walk yesterday morning more than four, and this morning, more than six miles.

"(Signed) J. CALDER.

"Oct. 28th, 1845."

This is the gentleman who, I said, recognised the identity of the mesmeric processes with the Indian modes of charming away pain.

Topical mesmerising, — by suspending the ends of the fingers over the pained part, breathing on it at the same time, and then drawing the fingers downwards, continued for a long enough time, say an hour or two,—is often very effectual in soothing local pain; and I have seen it relieve the pain in gout, bruises, and rheumatism.

The much ridiculed "mesmerised water" is another means of producing the mesmeric symptoms, and as it is practically useful, the process for preparing it shall be described; and let those who do not choose to avail themselves of it, let it alone. But before doing this, and illustrating its effects by facts, it will perhaps be advisable to clear the way for the reception of them, by showing that there is no *primâ facie* absurdity or impossibility about the matter. In accordance with Lord Bacon's advice, I will "foment the part to make the unguent enter the better." To those who will condescend to think seriously on the subject, and apply their previous knowledge to the examination of it, I would suggest, that if there is a vital emanation from the body, called "Mesmerism," there is nothing improbable in the assertion that it can be communicated to water and other inorganic substances, like other invisible and imponderable agents. Water absorbs

air and different gases, and the odours of neighbouring objects with great facility; a glass of water can be charged with electricity, or an empty glass filled with it. Mesmerism has been called "animal electricity," and if correctly named, we should expect it to resemble inorganic electricity in many particulars: but whether it is a modification of electricity or not, I can see no reason why water should not absorb an invisible animal fluid, as easily as a fluid which is imperceptible and organic. There is nothing in the known laws of physics to make it improbable that water can be mesmerised, as well as electrified. On the contrary, it seemed to me so probable from analogy, that I fully believed the statements of others regarding it, and made my first experiment with considerable confidence.

Deleuze, a most honest and trustworthy man, and who had practised Mesmerism, for thirty-five years in France, with great success, gives the following directions for mesmerising water. "It is to be poured over the tips of the fingers, and the glass is then to be mesmerised by passing the hands down its sides, and the water may also be breathed upon." The following process, though less delicate, is a shorter, and, I believe, a

more effectual mode of charging water with the mesmeric fluid.

As there is good reason to believe that the breath is impregnated with the vital fluid, I breathe through a tube into the bottom of a cupful of water, keeping the points of the fingers in contact with the surface: in five minutes the water is charged, and here are my first experiments with it.

June 28th.—From her extreme sensibility to the influence, it seemed to me probable that the woman Alunga would exhibit in perfection the virtues of mesmerised water, if it had any. In the presence of my hospital attendants, I to-day took an ounce of water from the common reservoir, and mesmerised it, putting the like quantity of plain water into another glass. We then went into the women's ward, and I gave the plain water first very slowly, asking her if it had any taste? It was only plain water, she said; I then gave her the other; after waiting some time, she said it was different from the first,—that it was sharp to the tongue, and created a warmth in the stomach. Almost immediately, her countenance began to change; she insisted upon getting up to walk; and I immediately saw that she was a

somnambulist: after taking a few staggering steps, she would have fallen, but was prevented, and taken back to bed, where she instantly sank into the mesmeric coma, and remained so for hours.

June 29th.—I to day had the pleasure of meeting the Rev. Mr. Long, from Calcutta, a stranger to me and mesmerism, who asked me if I could show him any mesmeric cases in the hospital at present. I replied that I should be happy to verify, in his presence, an important experiment regarding the efficacy of mesmerised water, which I had made for the first time, yesterday. I was glad to learn that he had never heard of such a thing; and he willingly agreed to accompany me to the hospital.

I took the same quantity of water as yesterday, out of the common cistern, and charged it before him, and again put the same measure of plain water in another glass, the woman being unconscious of our presence. We then went to her, administered the common water first, and waited for the effects; none appearing, the mesmerised water was given, and in a few minutes her expression altered; she rose, and walked in a wavering uncertain manner, and then set about washing the floor, which was dirty, she said.

Soon after she complained of the room being full of kites, crows, and paddy birds, and desired them to be scared away. On being asked who I was, she said I was a Baboo, and that the sweeper was her brother Essan, who had come to take her home; she was put to bed, and immediately fell into the mesmeric trance. We then retired to talk over the matter, and I asked Mr. Long if he had any doubts that could be resolved on the spot. He said, nothing could be more certain than the connection of cause and effect, and that he would gladly certify to it. After some time we returned to her, and I awoke her, all but her eyes; these she could not open; but this being done with my assistance, she was seen to be in complete possession of all her senses and faculties, as was evinced by her ready and consistent replies, and the total revolution in her countenance.

June 30th.—I thought of varying the experiment on the woman Alunga, whom I had not seen to-day: I therefore went to the house of my assistant, and asked him to give me a phial and a little water, telling him my intentions, which were to call for Mr. Bretts, the deputy-collector (who had never seen Mesmerism, and to whom I had never spoken on the subject), and request

him to go to the hospital, give the water to the woman, and then send to inform me that it was done. Having mesmerised the water, I carried the phial to Mr. Betts, and begged him to be good enough to perform an experiment for me, and at the same time satisfy his curiosity, perhaps. I assured him, on my honour, that this was pure water, only mesmerised, and requested him to go and give it to the woman named Alunga, and then to let me know. He kindly consented, and in a short time a messenger came for me; when I arrived, the woman was getting up to walk, in the same delirious state as on former occasions, her phantasms only being varied; and again she could not open her eyes, even by pulling: when partially opened they instantly closed again, till I relieved her by blowing and rubbing. On awaking there was no vestige of derangement in her mind or perceptions. Mr. Betts was sure of the facts he had witnessed, but, I suspect, had some difficulty in believing that *he had only given water.*

June 28th. — Sidissur Ghose, a prisoner, in a different hospital; I saw him for the first time to-day, at eleven o'clock; he has been suffering for three days from inflammation of the testes, which were extremely tender to the touch, and

he was bent double in walking. I determined to subject him to the trance if possible, for the following reasons. As a fire expires for want of fuel, it seemed to me very probable that inflammation would die out during many hours of absolute repose to the system, pain and irritation being the sustaining causes of inflammation. Remove all pain and sensibility for hours, and it is only natural to suppose that the circulation will return to its usual channels, and the disease be removed by a natural curative effort. If the repose be too short to recruit the vital powers, the trance can be repeated at will when the system has been once affected. I succeeded in entrancing him in half an hour, and left him sleeping. I then went to the Charity Hospital, and made my first experiment, as above related, on the woman Alunga, with mesmerised water. Having completely succeeded, I returned to the Jail Hospital, and found that the man Sidissur had just awoke. He bore pressure much better, and there was no heat in the part. I gave him three ounces of mesmerised water, and in five minutes he was again in the trance.

June 29th. — Sidissur awoke at nine o'clock last night, but went to sleep again immediately, and slept all night; the swelling has decreased,

and I can squeeze the part all over without causing pain, and he walks erect, with ease. The disease is subdued, but for the sake of experiment I gave him another dose of mesmerised water, and in three minutes he was in the trance.

June 30th. — Sidissur again slept till nine o'clock last night, and had a good night afterwards. Dismissed cured, at his own request.

July 2d. — Nobee, an elderly, worn-out woman, has had rheumatism in her back for some months: she was put into the trance to-day, and on waking was free of pain.

July 3rd. — No pain. Gave her a dose of mesmerised water; she soon said that she felt warm all over; a general tremor followed; and on being desired to walk she complained of her head turning, and walked a little, with great difficulty. On returning to bed she fell asleep immediately, and slept for two hours.

July 29th. — At the public Séance, already mentioned, eight men drank mesmerised water prepared by my assistants, and superintended by two doctors, and two clergymen; and in spite of the incessant tormenting of their visitors, four of them, to my great surprise, became entranced and

cataleptic, and were converted into somnambulists.

December 14th.—Jadoo, a prisoner, convalescent from cholera, is plagued with continual hiccough—eight convulsions in a minute. To be mesmerised: he was subdued in fifteen minutes, but there was little change in the hiccough for half an hour afterwards. He was raised upon his feet, and a bandage soaked in cold water wound around his chest, without awaking him, and he was allowed to sleep half an hour longer: still no change for the better. I now prepared some mesmerised water, and awoke him; he no sooner drank it than he fell asleep again, and the hiccough immediately stopped, and never returned. He slept for three hours after drinking the water.

To illustrate the subject farther, as I could do by scores of examples, would be intolerably tedious; and I hope it will not be for a moment supposed that I mean to say that such will in general be the effects of mesmerised water, but only that in persons *already under* the mesmeric influence such results can be procured: it has been known to affect the uncontaminated system, but it is a rare occurrence.

The means used for dissipating the mesmeric influence, are precisely those employed for disengaging the brain in fainting, or natural insensibility, caused by a revulsion or stoppage of the nervous fluid by natural causes. They act, I presume, exactly in the same way, by re-determining the nervous currents to the skin and the organs of sense; thereby rousing the brain from its torpor of exhaustion in the case of fainting, or relieving it of the nervous plethora which I have suggested might be the cause of mesmeric coma.

Blowing sharply in the eyes, rubbing the eyelids, and eye-brows, and sprinkling cold water in the face, are the methods for de-mesmerising the brain, and when locally applied, are equally efficacious in de-catalepsing rigid limbs. Let an arm be catalepsed, short of the most intense degree of coma, and although it may require considerable force to bend it, yet blowing on it, rubbing it gently, or letting a few drops of cold water fall on it, will generally relax the rigidity of the muscles, and cause the arm to fall down to the side, with its flexibility restored; and it looks to me as if the muscles recovered their functions (just as the activity of the brain is renewed) by being relieved of the nervous secretions that have

deserted the surface, and become concentrated on the sensorium and muscular system.

The smallness of the cause, and the greatness of the result, when we restore a person to the complete possession of his senses, and intellect, by sprinkling water in his eyes when in the mesmeric coma, are quite as remarkable in natural fainting, in which the effects are often equally striking and instantaneous; and I leave it to the reader to determine whether the exhaustion of the nervous system in natural coma, and its presumed repletion in the mesmeric state, does not assist us in understanding the similarities and differences observed in natural, and mesmeric sleep.

CHAP VI.

Mesmerism as a Remedy.— Coma as a Medical Agent.— Journal of Practical Mesmerism.—Chronic Inflammation of Eye cured.— Nervous Headache ditto.— Acute Inflammation of Eye ditto.— Return of Nervous Headache prevented. — Rev. Mr. Fisher's Report. — How to make a Convert. — Tooth drawn in the Trance. — Convulsions cured by ditto. — Arms straightened in ditto. — Sense of Formication removed.—Lumbago, Sciatica, Pain in Crural Nerve, cured. — Palsy of an Arm ditto. — Hemiplegia greatly benefited.— Tic cured.— Rheumatism ditto.—Mesmerism as a Disease.— Resembles Hysteria. — Ignorant Charges of Imposture.— The Public abused.— The Public disabused.— Folly and Unfairness of its would-be Guides. — Spontaneous Development of the Mesmeric Disease.— Mesmerising by doing nothing taught by the Mesmerists themselves — A natural Consequence of frequent Mesmerising. — Examples of Mesmerising by doing nothing.— Hysteric Theory. — Hope to hear of Hysteria as a Remedy soon.— Rational Mode of studying Mesmerism.

For practical purposes, the physical effects of Mesmerism may be divided into simple somnolence, semi-insensibility, and total insensibility, or coma: of the first nothing more need be said, and abundant examples of the others will be given in my "Journal of Practical Mesmerism."

Although accepting thankfully whatever nature

deigned to offer in answer to my inquiries, in the various cases in which I consulted her; yet they were not presented to the *vis medicatrix naturæ*, at hap-hazard, and without selection. My first case was indeed a "pomegranate full of many kernels," and offered so many facts from which great practical deductions could be drawn, that I only followed out the indications of nature in all my subsequent proceedings; so that my operations have not been "A mighty maze, and all without a plan."

I. I was certain (if life is not a phantasmagoria) that in the mesmeric trance, the muscles of the whole body had been as plastic, and obedient to my command, as clay in the hands of the potter; and I felt satisfied that if the same state of things could be brought about, muscular spasms and contractions would disappear before this great solvent. The straightening of limbs, long contracted, very soon verified this inference.

II. Having, in this case, witnessed the total extinction of nervous irritability, I was led to conclude, that in a like state of things, nervous pains would vanish before this supreme anodyne. The cure of nervous headaches immediately demonstrated the truth of this idea.

III. The insensibility to pain convinced me

that the most painful surgical operations might be performed without the knowledge of the patient, and this has been done to an extraordinary extent, so much so, as to be a daily matter of course.

IV. I had seen high local inflammation, and sympathetic fever suspended during the trance in my first patient, and that the artificial inflammation (which it was my object to excite, for the cure of hydrocele,) did not develop itself, while the mesmeric influence was in activity, and that the pulse and temperature had become natural: thence I inferred, that inflammation was probably incompatible with such a state of the constitution, and I soon succeeded in curing acute inflammation of the eye and testis, by no other means than the mesmeric trance.

As regards the certainty of my conclusions, it required no great sagacity to believe the evidence of my senses, and to go and do as nature bid me. A *fact* in nature being once ascertained, and all its accessories carefully observed, we may be confident of re-producing it, at will, by fulfilling the necessary conditions, if the phenomenon is under human control. I therefore tried to bring about the same condition of body, by the means required to be used by nature, before she

will condescend to interfere in our favour, feeling convinced that if she did interfere, it would be with unerring wisdom, and unapproachable skill; and that what had been feebly begun by her weak, but obedient creature, would be triumphantly completed by her laws, when brought into action; the way for them being merely prepared, in the manner pointed out by experience,

"Nature is but a name for an effect, whose cause is God;" and the Author of nature has ordained, that such effects should often follow such predisposing causes.

Mesmeric coma will in the following pages chiefly figure in surgical operations, and is not so often required in the treatment of medical cases; but when it can be induced, it is extremely important in instantly extinguishing nervous pains, arresting convulsions, and aiding the natural resolution of inflammation, by its anodyne and restorative powers; and if it could be induced in the commencement of some of the most fatal diseases; it would probably arrest their progress, for it revolutionises the whole system, and every other constitutional affection is for the time suspended.

In chronic inflammation it is a useful discutient, gently stimulating the nerves, and capillary

vessels of the part, to more healthy action; and for this purpose, local Mesmerism is only required.

The chronic exhibition of Mesmerism as a general tonic, in diseases of debility promises to be of great service, especially in functional derangement of the nervous system, and I am hopeful that we have at last got a *direct* nervous remedy, hitherto, a "desideratum" in medicine.

In palsy from weakness of the nerves, it promises to assist us greatly, and Dr. Elliotson has recorded many cures of cases he could not have managed before. All who venture to confess the truth to themselves, know how miserably impotent for the cure of palsy, and nervous diseases generally, are the medical means hitherto employed. If we succeed, we often cannot tell why, and the connection of cause and effect is very uncertain. But in the chronic treatment of palsy, by Mesmerism alone, the patient often feels and shows early and continued improvement under the action of this natural remedy; and we cannot refuse to believe that it is the exciting cause: we must believe that it is, or own that it is a spontaneous cure of a commonly incurable disease! But both the practitioner and the patient must remember, that Mesmerism is no ex-

ception to the general rule, that a chronic disease must have a chronic cure: much patience and labour will be required in the mesmeric treatment of paralytic affections, and the result will greatly depend upon whether the disease is one of debility or over excitement of the nervous system. In the latter case, I should think, that unless the sedative effects on the system could be induced, we should be disappointed; in the former, every degree of the influence would probably be of service.

We find in practice, that nervous persons, from over-excitement of the nerves, are with great difficulty subdued, and appear to be still farther irritated by subjecting them to the mesmeric process; whereas those who suffer from irritability of the nerves from weakness, are easily affected, and soon benefited by it.

The medical cases adapted for the use of Mesmerism, do not occur in my practice among the poor so often as surgical cases, as the labouring poor do not usually resort to medical advice for nervous diseases, till they are past cure: I can however present the reader with some interesting cases, which I will extract, as they occurred from my

JOURNAL OF PRACTICAL MESMERISM.

"May 7th.—Nazir, a Mussulman; aged twenty: is suffering from the *sequelæ* of opthalmia of two months' standing; the sight of the left eye is destroyed. The cornea of the right eye is muddy with superficial ulcerations, and a pterygium is forming; there is constant lacrymation, and he cannot distinguish a white man from a black. I placed him in a chair before me, and directed the operation to the eyes and head generally, desiring him to mention what he felt as we proceeded. He soon said, that he felt an agreeable warmth where my fingers passed without touching him; shortly after, he said his eyes were easier, and on extending the process to the body, he felt a general warmth pervade it, and sweat stood in drops on his face. He next said, that he felt a fear come over him that he could not account for, and desired greatly to sleep: having no desire to go farther, I here stopped: —the eyes to be mesmerised daily for ten minutes, and then be put to sleep."

"May 22d.—Has been mesmerised daily, and put to sleep twice: he always feels better after the process; says that his body feels pleasant and light, and the expression of his countenance is

much improved. The lacrymation has ceased, and he read two words in Bengalee and Persian to-day; the pterygium will be the only impediment to his sight.

"May 22d.—Keenoo, a prisoner; saw him for the first time to-day, at eleven o'clock. He has had a severe pain extending from the left eye-brow to one half of his head for four days; and there is pain on pressing at the supra-orbitor notch. I made him lie down, in a small room off the hospital, and in twenty minutes left him asleep with one arm raised perpendicularly in the air, and locking the door, I left him alone.

"I returned at one o'clock, and on opening the door, found him lying exactly as I had left him with his arm still in the air: he awoke whilst I was looking at him, and said that he had not been asleep. On being asked why his arm was in the air, he could give no reason for it. So insensible is the approach of sleep under this grand narcotic, or so sudden its invasion, that in the minds of the sleepers often no trace remains of the circumstances attending their sleep! This was seen in the case of Mrs. Clermont. He awoke perfectly free from headache.

"May 24th. — No return of pain — discharged cured.

"May 24th.—Nazir Mahomed, a prisoner; saw him for the first time to-day, at 11 o'clock. For the last four days, he has laboured under acute inflammation of the conjunctiva: the conjunctival vessels form a raised zone around the cornea; there is constant lacrymation, pain over half the head, and he cannot distinguish objects.

"I made him lie down on the floor, and rendered him cataleptic in twenty minutes; then putting his hands, clasped, above his head, I locked the door, and took the key with me to Chinsurah, two miles off, where I found the Rev. Mr. Fisher, and Mr. Money, the collector, who are much interested in my proceedings, and daily ask, 'What progress?' I answered, that a man entranced was waiting my return; and they offered to go back with me. On opening the door we found that the man had just awoke; and being asked in what attitude he found himself on waking, he said that his hands were clasped over his head: he reports the pain to have quite left the side of his head; only a little remains about the eye; the eyelids move much more freely, and the watering is less; his general feelings are much improved: before the sleep he felt his body hot and heavy, and it is now cool and light. Cold water to the head and eyes; a dose

of physic. When we were leaving the hospital the native doctor reported that a man had just come in with a pain in one side of his head, like the man cured on the 23rd. I desired him to be brought before us, and he stated that for the last six days he had suffered from an acute intermittent headache, confined to one side of his head; that it commences at four o'clock in the morning, and continues till 12 P.M. Turning to my friends, I observed that if they would wait I should like to entrance this man, as a preventive. They consented to do so, and Mr. Fisher has been good enough to send me his notes of what followed: —

"*Mr. Fisher's Report.*

"On Saturday last, the 24th inst., I visited the Jail Hospital, in company with Dr. Esdaile, for the purpose of seeing a prisoner awakened out of the mesmeric trance, who had been suffering for some time from an inflamed eye. Upon our arrival the man was awake, and no further experiment could therefore be tried with this patient. Another, however, immediately presented himself, who had never been subjected to the mesmeric influence before, and whom, I

believe, the doctor had never seen. He had been suffering much for some days from severe pains in the head and face; though not at that moment in pain, it was thought advisable to try the effects of Mesmerism as a *preventive.* The manipulations were immediately commenced, and in seven minutes the man was in a cataleptic state. We tried various means to test the intensity of the trance: his limbs rigidly maintained themselves in any posture in which Dr. Esdaile chose to place them; and at last he was raised upon his feet; his back being slightly bent, his arms stretched over head, which was drooping upon his shoulder, and he remained fixed in this constrained position for some time, without exhibiting any symptoms of consciousness, or uneasiness. After a few minutes he was left to his deep repose, reclined upon the ground; and I understand that, since this first trial, he has never had the slightest return of the pains of which he previously complained: we were much astonished at the phenomena exhibited on this occasion; the limbs being so extraordinarily supple, and at the same time capable of being so rigidly fixed in any position, at the will of the operator.

(Signed) F. Fisher.

Chinsurah, May 29th, 1845.

May 25th. — Nazir Mahomed, entranced yesterday for conjunctivitis, has slept well all night. There is no pain in the head; very slight uneasiness about the eye: no watering. The zone of blood-vessels around the cornea is gone, and the inflammation is reduced from the vivid redness of the acute stage to the dull, brick-red colour of the chronic state. He can now see very well with the inflamed eye.

I put him on a high stool before me, and desired him to tell me when he became sleepy, but he had not time to do so, as I left him sitting entranced in five minutes: this was done with the idea of lessening the determination of blood to the head. I then proceeded to my usual business in Chinsurah, and was there introduced to Mr. M'Questen, the dentist, who was on a professional visit at the house of one of my patients. As he expressed a great desire to see some of my Mesmeric cases, I said that he had better take the present opportunity, as I had left a man entranced, and hoped to find him so on my return, and that others were undergoing the process at the Charity Hospital, but I knew not with what results.

The lady and gentleman of the house, hereupon, suddenly resolved to go too; and the ex-

pedition gave rise to a little episode, which I have the pleasure of introducing here, by permission.

We returned to the Jail Hospital, after I had been absent an hour, and found the man sitting precisely as I had left him, and his body colder than natural. The influence was now nearly worn out (partly, no doubt, by the exhausting position), and he awoke soon after our arrival. He said that the eye was still farther improved, and it looked so. I consider the case terminated. It was evident, to the most unpractised eye, that inflammation was incompatible with such a state of the system.

But a man sitting on a high stool for an hour without knowing it, was not enough to satisfy the curiosity and unbelief of my lady visitor. Her theory was, that I must be "*Angelus aut Diabolus,*" to be permitted to do such things; and as both hypotheses had their difficulties, she took refuge in an unapproachable unbelief. This to me was a singular mental phenomenon, and I determined to experiment upon her mind through her own senses (as she would not believe her husband even), and to observe the effects. The man entranced for hemicrania yesterday was sent for, and put upon the stool. The gentlemen

pulled out their watches, and in three minutes he was as insensible to life as the stool on which he sat. He was now put through all the amazing postures already described, and his friends were called in to awake him, but all to no purpose, till I came to their aid, when he awoke with a violent start, and look of alarm; and, on being questioned, said that he had gone to sleep of his own accord.

My honoured visitor had now evidently some difficulty in collecting her senses, and kept exclaiming,—"It's impossible! it can't be! I *won't* believe it; it's all a trick!" I replied, "If you will be good enough to go to the other hospital, I shall, perhaps, be able to show you more tricks of the same kind."

Having entered the "Blue Chamber," she was resolved to see its mysteries, and the party proceeded. I had ordered a man to be mesmerised in the morning, to have a tooth taken out; and, on reaching the Charity Hospital, had the satisfaction to find him entranced, and begged Mr. M'Questen to give him the benefit of his skill. This he declined; and I extracted the tooth before him, without awaking the man, and presented it to the lady as a mesmeric "souvenir." Seeing a collection of matter near the ear, I also made an incision into the swelling before he

awoke. On coming to his senses he said that he felt as if an ant had bit him when he was asleep.

I had now the gratification, rarely granted to first believers,—of living to see the triumph of the truth. My fair infidel frankly gave up the "diabolic theory;" and although she could not yet adopt the angelic one in my favour, yet she was convinced that, instead of being in league with the evil power, I was a highly favoured individual, and congratulated me on my new powers of doing good. At parting I took the liberty to hint, in the most respectful manner, that there was something still more wonderful to me than Mesmerism; and that was, the extent of human incredulity on the subject.

June 6th.—I was called at eight o'clock last night, to see the wife of Baboo Essanchunder Ghosaul, deputy-magistrate of Hooghly. I found her in dreadful convulsions; she was speechless, and suffering from a constriction in the throat, that threatened to suffocate her every minute; and she constantly beat, or pointed at the part. At one moment her body was perfectly rigid, and in another it was bent back like a bow, till she rested on the back of her head and heels only. I never saw such convulsions except in Tetanus

and Hydrophobia, and all I knew of the resources of medicine was useless; for how could she take physic when she could not take breath? I therefore had recourse to my new solvent power, and, after nearly an hour's hard work, I left her asleep, and catalepsed.

July 1st. — She has had no return of the fit. This is the lady for whose relief the conjuror was sent, but came too late.

June 26th. — Alunga, aged 24: she has slight contractions of both elbow-joints, from rheumatism, with acute pain on pressing the ulnar nerve at the elbow. At first, she did not bear much handling without awaking; but, on being left alone, the trance deepened, and she permitted me to work her joints like door hinges, and extend them to the natural degree, without awaking. One arm was much freer after the first trance and extension, and there was no pain.

June 27th. — Complains of considerable pain in her left arm to day, and the nerve at the elbow is very tender. I passed my fingers along the course of the nerve for a few minutes, which removed the pain, and allowed her to extend the arm: I then held my fingers before her eyes for

a few seconds, and she fell into my arms insensible.

July 3rd.—This woman's pains fly about, but I can chase them away from any part by holding my fingers over it for a short time. She came limping up to me to-day, to have the pain taken out of her "tendo Achillis;" and this I did by passing my fingers over the pained part. I then grasped it firmly: she felt no pain, and by words and looks expressed the utmost astonishment and delight. This woman's sensibility is such, that I, or any one, can now make her delirious by merely looking at her for five minutes: but more of this hereafter.

Aug. 18th.—I requested Dr. Bedford to satisfy himself if the woman Alunga had pain in any part of her body. On being asked, she said there was acute pain in one heel; and Dr. B. spent a long time in testing the reality of its existence. He at last said that he was convinced there was considerable pain in that spot. I then passed my fingers over the part for a minute, and grasped the heel as firmly as I could, and she declared the pain had vanished; and Dr. B. allowed that it had. He then looked at her steadily, and in a few minutes developed the mesmeric delirium, and desire to sleep-walk, always produced in this

woman, if the influence is not quickly concentrated upon her: the other symptoms, tremor of the eyelids, inability to open them when closed, and the mesmeric trance, all followed in due course.

July 4th. — Dookee, a shopkeeper. For several months has had a constant feeling of insects crawling about his face and scalp, and it often extends to the whole body; his eyes wink and water constantly. He was mesmerised for an hour, and then got a dose of mesmerised water. He soon after complained of general agitation, and feeling of alarm at the heart, and then slept a little. On leaving the hospital the sense of formication had entirely disappeared, and he did not wink more than was natural: he has not returned.

July 13th. — Four men and one woman were entranced to-day.

No. 1. for Lumbago.

No. 2. for Sciatica.

No. 3. for pain in the course of the crural nerve.

No. 4. for Syphilitic rheumatism.

No. 5. ditto.

They were all subdued by the usual manipulations, assisted by the breath.

After the first day the trance was induced in them all, by giving mesmerised water daily, till the 17th; on which day the three with neuralgic pains were dismissed cured; the syphilitic cases were not benefited, as might be expected, the constitutional specific disease being still in operation: the local pains were eased, however, and sleep procured: no small matter in such cases.

July 29th. — Sustee Ram, a bearer; aged 30. He became paralytic in his left arm, twelve days ago, during the night: he cannot raise it higher than his navel; there is pain under the scapula; and he has slept very little since the attack: — to be mesmerised daily, for half-an-hour.

July 30th. — Slept all night, can raise his arm to his breast, head, spine, shoulder, and arm: — to be mesmerised daily.

July 31st. — Slept yesterday, immediately after being mesmerised, and all night: can touch the opposite shoulder and his forehead to-day.

August 15th. — Has improved daily: usually sleeps after the process, and well at night.

August 25th. — Can hold his arm perpendicular, and has considerable command over it.

Sept. 8th. — Can clap his hands above his

head, strikes out well with the left arm, and squeezes my hand with considerable force. Discharged at his own request, being fit for work.

The next case I should never have taken in hand, if new hopes had not been infused into me by the evident effects of Mesmerism on the nervous system.

August 9th. — Geeois, a husbandman; aged 22. A man of large frame, and in good condition. There is complete palsy of the whole of the left side; the arm can only be separated from the side for a few inches. He has taken mercury six times, in four years, for rheumatism: the paralysis began four months ago, and he has been three months in his present state: — to be mesmerised for half an hour daily.

August 18th. — He sometimes goes to sleep during the process, and generally sleeps for two hours after it: he can raise the arm more, and there is a little resistance in the left side, on walking between two persons.

August 20th. — He began to walk a little with a stick to-day.

August 25th. — Improves daily; there is more command over the diseased side; the leg is stronger, and he raises the arm higher: he walked

to the end of the room to-day, with the help of a stick only.

Sept. 8th. — Much better ; walks across the compound, with the aid of a stick ; arm also improving.

Sept. 20th. — He has discarded his stick, and crosses the compound unaided.

Sept. 25th. — Daily improving ; he can hold his arm nearly perpendicular : there is every prospect of his recovering, and he was allowed to go home, with orders to his friends to mesmerise him daily, in the way they had witnessed.

December 10th. — Horo, a Hindoo woman ; aged 28. She has suffered for three years from *tic-douloureux* in the right eyebrow and temple, especially in the cold weather : it is very intense now, and comes on at 6 A.M., remaining till 2 P.M. — to be mesmerised. I returned after an hour, and found her asleep : she awoke soon after, and said there was no pain whatever in the part now, and that "it was cold as water."

January 8th. — She has *had no return of pain.*

December 14th. — Podo, a Hindoo woman, a beggar ; aged 40. She has been a cripple for a year and a half, from rheumatism in her shoulders and knees : there is much tenderness about the

joints, and her knees are so weak that she cannot sit with her hams bent, and is obliged to ease herself standing, and she cannot rise from the ground without pushing herself up with her hands: — to be mesmerised an hour daily.

December 16th. — Slept half an hour after the process to-day.

December 17th. — Feels much better.

December 18th. — Slept an hour to-day; the pain about the joints is much less; she can rise from the ground without aid, and walks much more freely.

December 19th. — Says she has no pain, and is quite well: dismissed cured, at her own request.

Mesmerism, like other powerful natural agents, is not only a remedy, but becomes a formidable disease when pushed far, and deeply rooted in the constitution; and a knowledge of this is the key to a variety of anomalous phenomena,— mesmeric in their origin, but not directly produced by it at the time, and which give rise to absurd charges of imposture, delusion, &c., from persons totally ignorant of the subject. These are, in fact, the secondary or constitutional symptoms of the primary disease — Mesmerism,— which has

contaminated the nervous system, and predisposed it to take on the Mesmeric action whenever it is deranged, especially by any thing having reference to the processes by which it was first developed in the system.

In this respect, Mesmerism very closely resembles Hysteria, which, however primarily induced, is apt to recur on any agitation of the body or mind, more particularly if it is in any way associated with the first disturbing cause; and they both correspond, in each being sometimes *voluntarily* producible. Every one knows how a *genuine* fit of hysterics can be *willed* on, and that often there can be no doubt of the *reality* of the exhibition; and, in like manner, some persons can *will* on somnambulism and the other Mesmeric symptoms, the reality of which are indisputable. To an experienced person, the springing up of true Mesmeric phenomena, without the usual exciting cause, is a moral demonstration that the system has been previously revolutioned by Mesmerism. The nervous centres having become morbidly sensitive by the action of this great nervous excitant, every shock of the nerves, especially if connected with Mesmerism, is exhibited in the shape of abnormal mesmeric symptoms.

The eye of the hunter can tell by the foot-

prints the kind of animal that has gone before: from the shadow we can guess the semblance of the substance; and, in like manner, the qualified observer, when he sees pseudo-mesmeric appearances, at once says, the Mesmerist has been here before me—*ex pede Herculem.*

It is high time that the public should be disabused of many erroneous impressions regarding the finer phenomena of Mesmerism, which have been sedulously propagated by medical men even, affectedly impartial, but, in reality, labouring under intense prejudice, and profound ignorance of the subject.

It is of no consequence to the community whether it is misled by the ignorance or dishonesty of those who set themselves up as leaders of public opinion; the offence against truth, the injury done to the public, and the injustice to those who have practically studied the question, and declared what they know to be true, careless whom it may displease, are equally great. It is a common thing for Doctors, who have never seen or thought of Mesmerism, to step forward to enlighten the public, and expose the "humbug." They have heard of "Mesmeric coma," and that, under its influence, the most severe surgical operations can be performed without pain; and they

thereupon exact *total insensibility* into their *experimentum crucis* of the truth of Mesmerism; and if any unfortunate Mesmeric wight, having a vulnerable point in his "tendo Achillis" even, should fall under their observation, he is denounced as a hardened and determined impostor, and his physician exposed as a quack, or charitably allowed to be, perhaps, only a fool.

Nothing short of the extinction of life will satisfy these discriminating observers: physiological revolutions in the system — altered bearing — changed expression in features and voice — the approach and advance of sleep — the extinction of some senses — and the preservation or exaltation of others, are all not only lost upon such philosophers, but are, one and all, "confirmations, strong as Holy Writ," of the existence of imposture! Such is the procrustean bed to which the anti-mesmerists bind down Nature in this most varied and wonderful display of her powers. If the body of their venerable mother be longer than her unnatural children, the Doctors, wish it, they mercilessly amputate the offending members; if shorter, she is pulled and stretched by pulleys, *secundum artem*, to the length prescribed. A dispassionate and candid judge of this description (the wolf

judging the lamb) is perhaps invited by a medical Mesmerist to satisfy himself by ocular demonstration in his hospitals, since nothing short of this can affect his understanding; and the Mesmeric guest commences his course of practical experiment by tossing and goring the patients (fortunately generally insensible) like a mad bull; his only thought being how to kill two at a blow; and because he has been compelled to develop all the Mesmeric phenomena *himself*, he revenges himself by declaring it to be all a miserable imposture and delusion: passion is the same all over the world, and it is easier to instruct ignorance than pride.*

But I am anxious that the public should know what Mesmerism really is, in order that they may know it when it comes before them, and be no longer deluded by prejudiced, ignorant, or interested *quasi* descriptions of it. Abundant examples of its acute, and extreme effects on the system will be found in these pages, as well as many of the intermediate phases, and each, to the discriminating observer, is distinctive and character-

* Those desirous of reading the details of such a truly scientific and dispassionate mode of enquiring after truth should peruse my brother's "Mesmeric Facts," published by Ostell and Lepage, Calcutta. — D. E.

istic of an unusual condition of the body. The *involuntary* quivering of the eyelids, and the spasmodic closing of the eye, in persons a minute before wide awake, and resisting, perhaps;—the extinction of one or more of the organs of sense, which we saw in full activity but a moment ago;—the eye turned up so that the white can only be seen, or staring wide open, fixed and insensible to light;—sleep walking,—delirium,—convulsions,—catalepsy, in persons not subject to these affections till they were subjected to the mesmeric processes;—is not any one of these induced symptoms as clearly the effect of some constraining influence as the production of insensibility? They are all links of the same chain, and in some patients can all be beautifully exhibited in sequence and connection, from the quivering of an eyelash to the most intense coma.

Another anti-mesmerist, who to save appearances has condescended to look at certain of the mesmeric phenomena, says, on seeing their reality:—"There is no use in denying the extraordinary condition these people are reduced to; but the whole secret of the matter is that they are a set of poor hysterical wretches, and I will show you that I can mesmerise them as well as you, by *doing nothing*." The enterprising experimenta-

list proceeds to redeem his pledge, and actually succeeds, to his great delight and the mystification of the public, in disproving the truth of the axiom, "*ex nihilo nihil fit;*"—for he produces a serious disease, hysteria, by the compelling power of *nothing!* Upon this, the obstructives congratulate each other, and call upon the public to put down the now naked humbug. Would not the public suppose that this mesmerising *by nothing* was an ingenious and original experiment of the anti-mesmeric school of philosophy? And yet the truth is, that they were taught their favourite trick by the *Mesmerists;* who have not only declared, that this can be done, but that it is a *natural consequence* of their proceedings, if carried to a certain extent. It is often very difficult, and laborious, to excite the mesmeric action in the constitution; but being once excited, a very slight recurrence to the original processes will bring on the paroxysm in all its first intensity, and if the excitement of the nervous system is kept up by frequent mesmerising, it takes on an independent diseased action, obeying constitutional laws which we do not understand: we, in fact, have inoculated the system with a nervous disease which often acts *spontaneously*, especially on any reference to the primary exciting cause;

and at this stage the *candid medical observer* steps in, and demands the applause of an admiring and confounded world, for having done with "nothing," what had cost his stupid mesmeric brother so much trouble to effect.

It is hardly credible that Dr. Elliotson had expressly said, and that our candid philosophers knew it:—"At length there is sometimes such sensibility, that almost any thing will induce sleep; indeed, no process at last may be requisite to produce the effect. I have three patients, whom I was originally some weeks in sending to sleep, though I gave each half an hour daily of manipulations, and gazing; but who now go to sleep on my merely raising my hand, or looking at them when they are prepared to expect sleep. I told each of them that, if she sat still, I would mesmerise her in the next room through the door. I retired, shut the door behind me, *did nothing*, but walked into a further room, turned back, and found her asleep: so with the other two in succession. While I did this, I thought as little of them as possible, and busied myself with any thing to distract my attention." — Mesmerists in all parts of the world have stated the same fact, and I can bear the most ample testimony to its truth.

What candid mind, after considering this explanation, will regard "mesmerising by nothing," as a demonstration of the imposture of Mesmerism?

I was explaining the *mesmeric disease* (for such it has become, at this stage) to a party of gentlemen, the other day, and while speaking, a man anticipated my intention to mesmerise him "by nothing," by becoming intensely entranced on the spot, when I was not regarding him. The gentlemen, and Dr. Scott among them, used every means to ascertain his condition, and were as well convinced that he had lost his senses, as that they were in possession of theirs: — in fact, although the paroxysm was spontaneous, he would have borne a severe surgical operation without feeling it. I went to the hospital to-day (8th Dec. 1845) after writing the last line, and had there the pleasure of meeting Dr. Behn, Professor of Anatomy and Physiology in the University of Kiel, Mr. Kiellerup, Naturalist, and Mr. Blyth, Curator of the Asiatic Society's museum: the two former gentlemen are attached to the Danish frigate, now here on a political and scientific mission. As all three were observers of nature by profession, I thought it a good opportunity to correct my own impressions by theirs,

if different from mine, and therefore submitted to their notice cases of direct and indirect Mesmerism. A man was brought before us with an enlarged and tender testis, and of the latter point Dr. Behn satisfied himself and friends, by pressing the part—there could be no mistake about it. I then, by the hands and breath, mesmerised him, standing before me, till he could not open his eyes, and the sensibility of the skin had disappeared. Dr. Behn then used any degree of pressure he chose to apply to the tender part, and the man's face was as placid as a statue of Somnus; every means was used to ascertain the state of the skin and the organs of sense, and it was clear that the ear was the only organ that transmitted any sensation to the brain, and this only of *sound;* when water was squirted suddenly into his ear, he said that he felt nothing, and on waking, he was surprised to find his face wet. I also converted him into a somnambulist, that the gentlemen might at once have before them as many as possible of the genuine mesmeric phenomena. Another man was then brought; and on asking him about his health, he said that he was feverish and had a severe pain in the side. This was evidently the case; for Dr. Behn pressed between the ribs, and found the intercostal spaces

exceedingly tender. I then put him in a corner of the room, and bid him sleep: in less than five minutes he was asleep, could not turn round, or open his eyes, catalepsy was established, and all sensibility had disappeared; as Dr. Behn ascertained by now pressing between the ribs to any degree he pleased; — and not only so, the whole chest was seen to be catalepsed and immovable. His eyelids were forced open, and the white of the eye could only be seen. The moment he awoke, Dr. Behn again made pressure on the intercostal spaces, and he showed immediate and acute suffering. — In a word, the spontaneous mesmeric condition differed in no particular from that induced by the direct application of the mesmeric influence, and my visiters seemed to be perfectly satisfied of the reality of the symptoms in both states.

It would be tedious to dwell on this point farther, and I hope enough has been said to convince the public that, in general, when people are said to have been mesmerised "by nothing," it is a certain proof that *something* has pre-disposed to this, and we know nothing that can do this but *Mesmerism*. It is hardly worth while to dispute about names; and if it is allowed that I can cure nervous headaches, and perform painless surgical operations

by hysteria, call the process hysteric or mesmeric — I care not.

But after all, there *is* a satisfaction in calling things by their right names, and I cannot possibly see how hysteria has got into my hospitals, where I never saw it before — coolies and felons not being at all nervous subjects. I have, therefore, generated a new disease among my patients by *nothing*, or by using the mesmeric processes. Which is the more likely, I leave my readers to decide. As natural hysteria may be supposed to be more powerful than the imitation, I shall look with impatience for the announcement, in "The Morning Post," that Mrs. Freak has been cured of her nervous headaches by the skilful application of hysteria, and Lady Tantrum has had her arm cut off when in a fit of hysterics, without knowing it. These should be easy feats for our fashionable physicians and surgeons, as they have the disease and antidote ready made to their hands; whereas, it costs me and my assistants great trouble to make the coolies and prisoners of Bengal hysterical, to the degree necessary to render them insensible to the loss of their members.

But seriously, if medical men wish to see and understand the effects of Mesmerism on the body, the natural and rational mode of proceeding is to

attempt to develope them in the persons of their own patients; and if they will take a tithe of the trouble I have been at, I can promise them very general success. The finest, as well as the most striking phenomena will thenbe equally diagnostic to their practised eyes, and their understandings will be left clear, and free to study and imitate the curative processes of Nature, undisturbed by doubts and suspicions regarding the powers of observation and the honesty of others.

CHAP. VII.

Mesmerism in Surgery. — Journal of Practical Mesmerism. — Mesmeric Trance: A Leg straightened in; Colic cured by; Penis amputated in; Arm straightened in; Arm amputated in; Breast cut off in; Abscess opened in; Heel flayed in; Tooth extracted in; End of Thumb cut off in; Arm laid open in; Three Abscesses opened in; Sinus laid open in; Gum cut away in; Invasion of the waking by the sleeping State. — Mesmeric Trance: Hypertrophied Prepuce cut off in; Suppurating Pile in; Both great Toe Nails cut out in; Knee straightened in; Ulcer on Temple burned with Muriatic Acid in; Seton introduced, &c. in; Tumour in Groin removed in; Fungoid Sores pared off in; Scirrhus Testes extirpated in; Cataract operated on in; Malignant Disease of Testes extirpated in; Unhealthy Sore pared in; Hypertrophied Prepuce cut off in; Pain extinguished by; Return on awaking; Amputation of Penis in; Unhealthy Sores pared in; Two Operations for Hydrocele in. — Mesmerism alike favourable to the Operator and the Patient.

In Surgery, the benefits of Mesmerism are not confined to the extinction of pain during an operation, but are of the greatest general and particular advantage in the after-treatment of surgical diseases. The nerves and brain have not been shattered by bodily and mental anguish, which generally excites an irritative fever in the system,

wasting the powers of life, and rousing local inflammation in the injured part; thereby often destroying all the hopes and precautions of the surgeon. In the mesmeric sleep, only the necessary local injury has been inflicted; and on awaking, the patient sometimes feels no pain whatever, and generally only a slight smarting in the wound; and the constitution sets about repairing the breach of substance quietly, and under the best possible circumstances: if local pains follow, they can be easily removed by topical manipulations; all which will be seen in the following

Journal of Practical Mesmerism.

April 20th.—Jeolal, my washerman, aged thirty-five, has been eighteen months ill; first with dysentery, afterwards with rheumatic fever, in consequence of which his left knee is bent upon the thigh at a right angle.

I considered him to be a hopeless cripple. I mesmerised him to-day in a quarter of an hour. At first, he supported his knee with both hands; but soon allowed me to remove them, and suspend them in the air. The leg was then gra-

dually extended, and straightened to a considerable extent, without awaking him.

April 21st.—The process was repeated to-day, and more force used, which awoke him; the leg was still farther improved.

April 22d.—The pulley was used to-day, and very considerable power applied before he awoke. The muscular contraction is now nearly overcome, and the remaining stiffness of the knee seems to be from the tendons and ligaments about the joint, and will probably yield to mechanical extension, by exercise.

May 11th.—He can now walk without a stick, but the fibrous contractions give way slowly. I am convinced that direct force might have torn the muscles of the thigh, but could not have relaxed them.

June 22d.—His leg is now quite straight, and the knee flexible; he has got a violent colic, and when speaking to me fell down in a fainting state.—Ordered to be mesmerised.

June 23d.—He slept for an hour, and awoke much relieved yesterday; but a paroxysm returned last night, and still continues.—Repeat the Mesmerism.

June 24th.—He remained three hours in the mesmeric sleep yesterday, and awoke quite well,

and continues so. His leg is now quite strong, and he has returned to his work.

May 12th. —Buxoo, a Khitmatgan. There is a fistulous opening in the urethra under the glans penis, which is sloughing and requires to be amputated. I desired him to be mesmerised, and returned in an hour. I found him asleep, and when looking at him, he suddenly opened his eyes, but immediately went to sleep again, and in five minutes after I cut off the glans, without awaking him. He awoke soon after, and said it was from fear, not pain.

April 20th, eleven o'clock, A. M. — Kangalee, a peasant; aged twenty, weak, and ill nourished. He had a fever four years ago, after which sores broke out in different parts of his body, and have left large cicatrices like burns. There is one about the left elbow joint, which has been permanently contracted to nearly a right angle, for seven months. He was catalepsed in twenty minutes; a bottle was then put under his elbow for a fulcrum, and the arm was gradually extended by depressing the hand. He moved a little, and the muscles contracted occasionally, but soon melted as it were, under my hand, and I left him,

with his arm perfectly straight, extended in the air, and still asleep. — Two o'clock P. M. He awoke half an hour ago. Sees his arm is straight, knows not how it was done, has no pain, and can move it freely.

May 2d. — He pulls the punkah daily with his left arm, for exercise.

June 14th. — Dismissed cured.

May 5th. — Rantoonee Buttachangie, a Brahmin; aged forty. There is a prodigious Fungus hæmatodes protruding from the left elbow-joint. A swelling took place at the joint when he was five years old, and has gone on increasing gradually, but the skin remained entire till an incision was made by a native doctor, twelve days ago, when the bloody mass started through the integuments. It exactly resembles the contents of an old aneurism; the structure of the fungus having been broken up by the actual cautery applied to it all over, in order to stop the bleeding: it was a frightful mass. I desired him to be carefully mesmerised, and went to Chinsurah, to consult with Dr. Elton, in charge of the troops there. We returned to the hospital together, and found him in a profound sleep, and decided to take the arm off instantly. It was removed, without his

moving or complaining, and Dr. Elton assured me that his countenance had never changed. He awoke immediately after the limb was off, and declared, again and again, that he was aware of nothing having been done to him till he awoke and saw his arm was gone; and he then saw Dr. Elton for the first time.

May 13th. — Is doing well.

May 16th. — He complains of pain in the stump to-day. — To be mesmerised.

May 17th. — He was easily put to sleep yesterday, and slept for three hours; was free from pain when he awoke, and continues so.

May 11th. — Meeroolla, a policeman; aged twenty-eight, strong and healthy looking. He has got a fatty tumour of the right mamma, which he begged me to remove to-day. I desired him to lie down, and let me carefully examine it, and commenced mesmerising him. In ten minutes he was fast asleep; in five minutes more I transfixed the tumour with a hook, drew it up off the muscles, and cut it out, without disturbing him in the least, and he did not awake till half an hour afterwards. He declares that he felt no pain till he awoke, and remembers nothing after my hands were placed on his stomach, which was in about five minutes from the commencement.

May 11th.—Podoo, a young Hindoo woman, has a swelling over the false ribs of the right side, requiring an incision to be made in it. I desired the compounder to mesmerise her, while I was engaged with the last patient, and she was ready before I was: a deep incision, an inch long, was made into the swelling, without awaking her, and I left her sleeping.

May 14th. — Maduh, a healthy-looking Cooly; aged thirty. I saw him for the first time to-day, at 11 o'clock. He has got a sore on the heel, of two years' standing; the skin is half an inch thick, separated from the subjacent parts all round, and requires to be removed.— To be mesmerised. I went on to Chinsurah, where I had the pleasure to be introduced to the Reverend Mr. Banergie, who is there on a visit, and who begged me to show him a person under the mesmeric influence. I replied that I disapproved of experimenting with so formidable a power, to gratify mere curiosity; but I had left a man under the process, and that if he would go to the hospital, on chance, he might possibly be gratified. I returned to the hospital after an hour, and there found the Reverend Mr. Fisher, Mr. Banergie, and Mr. Money, the collector. The patient was asleep,

and I immediately commenced dissecting the thickened skin from the plantar fascia, which was very difficult, owing to its thickness and hardness. It almost resembled a horse's hoof, and removal must have been very painful under ordinary circumstances. He was completely insensible to the pain however, and remained asleep a quarter of an hour after I had finished.

Mr. Banergie then questioned him, in Bengalee, regarding his feelings, and he protested that he felt nothing till he awoke. Many of the patients, already mentioned being still in hospital, Mr. Banergie examined them in Bengalee, and in no instance did their accounts vary from what I had related.

May 26th. — Ram Dass, a large robust man, has a supernumerary tooth between the eye-tooth, and the first grinder, growing horizontally into his mouth, and causing him great annoyance. I entranced him in a quarter of an hour, lying on a mattress on the table, and proceeded to open his jaws. It cost me some trouble to relax the temporal muscles, and I had to proceed cautiously, as he did not appear to be under the extreme influence of the mesmeric power. From its position, it was difficult to lay hold of the tooth, but it was at last grasped, and extracted. He moved,

and moaned a little, but I soon tranquillised him again, and he did not awake till almost suffocated by the blood. He declared he awoke from this cause, and not from pain.

May 29th. — Sibehurn Sing, a young robust man, had his thumb nearly cut through by a sword, fourteen days ago. An attempt was made to unite it, but failed; and the point of the finger would be a nuisance if kept. In ten minutes I made him insensible, and cut off the end of the thumb without awaking him. He soon after quietly opened his eyes, and I asked him:—"Have you been asleep?" "Yes." "Have you any pain?" "No." "Has any thing hurt you to-day?" "No." "Do you wish your nail cut off?" "Yes." "Look at it." He did so, looked confounded, and exclaimed, "It's gone!" "Who did it?" "God knows." "How did it happen, has it fallen off itself?" "I can't tell — I know nothing about it."

May 30th. — Modoomohun Ray, a fine boy, twelve years old, was brought to the hospital, fourteen days ago, with a compound fracture of both bones of the forearm, and my assistants had several times tried to mesmerise him, in the hope of

assuaging the pain, but without success. Matter has formed, and the wound must be enlarged, upwards and downwards. As he was apprehensive, I put a piece of wet cloth over his eyes, and went on with my affairs, telling him that it would cool his brain. The people were all dismissed, and, approaching him unobserved, I succeeded in entrancing him in ten minutes, and laid open the arm without disturbing him. I returned after three hours, and found him still sleeping. On awaking, he said the pain was much less, and that no one had hurt him that day.

June 2d. — Gungaram Dass, a prisoner, was injured, ten days ago, by some rubbish falling on him, and in consequence three large abscesses have formed at the elbow, wrist, and ankle, which require to be opened. I subdued him in a few minutes, opened the abscesses, and left him sleeping. On my return, after two hours, he had just awoke, and I found him sitting up looking at his wounds. I asked him how the pus had escaped, since I saw him in the morning? He could not tell. Of its own accord? He supposed so. Had any one cut or hurt him to-day? No one.

June 16th. — Toorab, a peasant, aged thirty,

of a rickety constitution, has a sinus, six inches in length, under the pectoral muscle, of seven months' standing. We have not been able to close it by any means, and it is necessary to lay it open. He was entranced by one of my assistants, and I laid the whole of the diseased tract open without his knowing it, and left him sleeping.

June 15th. — He awoke soon after I left him; and on awaking, asked where the blood had come from? He has hardly had any pain in the wound, and has no recollection of being disturbed in his sleep yesterday.

July 9th. — Mrs. Clermant is suffering from one of her wisdom teeth; half of it has come through, but the rest is covered with the indurated and ulcerated gum. I explained that the source of the irritation must be removed, by cutting away the offending gum.

July 10th.—I entranced her to-day, sitting on a couch, in the presence of her husband and his sister; laid her back and cut away the gum without awaking her, and left her sleeping.

July 11th.—This is a very interesting case, as it shows the invasion of the waking by the sleeping state. Mrs. C., on awaking yesterday, arose as if from common sleep, and went to adjust her

hair in the glass, when she saw blood about her mouth, and this first attracted her attention to the tooth; she thought the gum had burst, and was still expecting me to call. For, strange to say, she had no recollection of having seen me that day, nor of what happened for half an hour before I put her to sleep. The incidents, her husband informed me, that occurred during this time were these: —She received letters from the postman, and paid for them; a lady came to visit her; and then I arrived, and sat conversing with them a short time. After seeing the lady to her carriage, I returned and mesmerised her:—all these occurrences were blotted from her mind. She feels quite well, and awoke much refreshed. If such inroads are made into the regions of sense, at one sitting, the effect of frequent unnecessary experiments may be guessed at in such sensitive subjects as this lady; and this is the power trifled with, and made a show of for money! *

* While in London, arranging for the publication of this work, I had the pleasure of being introduced to Dr. Elliotson, under whose guidance I mesmerised two females, although I had never before seen Mesmerism, or attempted to practise it. These women being accustomed to be mesmerised, I was not surprised at my success; but an event which happened a few days afterwards, astonished both myself and the friends who witnessed the

July 17th.—To-day, in the presence of Mr. Davidson, commissioner of the district, and Mr. Alexander, Registrar to the Board of Revenue (who have requested me to name them as witnesses), I operated on a man for hypertrophy of the prepuce, without awaking him. After letting him sleep some time, I asked the gentlemen if I should awake him, and at their desire, did so in a moment, by blowing in his eyes. He was restored at once to full consciousness, and Mr. Davidson remarked, "I wish Doctor —— was here, who says you do this by opium." My visiters, understanding Bengalee, asked him, if any one had hurt him to-day. He

occurrence. At an evening party I met a young gentleman from Oxford, who requested me to mesmerise him. He had never seen Mesmerism; and yet, in one minute, his eyes closed under my manipulations, and in less than three minutes he was fast asleep. Being diffident in my own powers, I de-mesmerised him as speedily as possible. He thus described his sensations. "The moment you pointed your fingers at me, I felt uncomfortable. I dared not meet your gaze; a sensation of heat, resembling a stream of electricity, commenced at my forehead, and followed the course of your hands, down to the pit of my stomach. I could not open my eyes. I knew I was sitting on a chair before you, and the last idea in my mind, before falling fast asleep, was this — Shall I ever be allowed to rise again?"

This fact seems to prove that the power of mesmerising, and of being mesmerised, is more general in this country than is commonly supposed.—D. E.

said, "No." If he would like his disease to be removed? He answered, that he would thank God if any one would do so. He was then desired to sit up, and his cloth removed; when, seeing his nuisance was gone, he fell back with an exclamation of wonder and gratitude.

July 25th.—Buggabuttee, a Hindoo woman, aged forty, has been troubled with a suppurating pile, as big as the end of my thumb. She was mesmerised at eleven o'clock, and at twelve I cut off the tumour, and though she moved and moaned, on awaking half an hour after, did not know that any thing had been done to her.

Aug. 4th.—Sona, a Hindoo woman; twenty-five years old. Both nails of the great toes are destroyed to the roots, by the combined effects of syphilis and mercury, and their place is filled with a fungoid ulcer. She was mesmerised at twelve o'clock, and at half past one, P. M., I dissected out the entire root of one nail, without awaking her: her left hand and arm trembled only, and this was subdued in a few minutes, by her hand being held in mine.—Left her sleeping.

Aug. 5th.—Again entranced, and I cut out

the other nail without annoying her. On neither occasion has she had any pain on awaking.

Aug. 6th.—Golam Hassein. His knee has been contracted to a considerable extent for two months, from rheumatism. He was mesmerised for the first time at eleven o'clock, and I made his leg straight at one o'clock, the new ligamentous adhesions were felt, and heard, cracking under my hands.—He felt no pain on awaking.

Aug. 8th.—Gendo, a Hindoo woman; aged fifty. There is a large sloughing ulcer, covering all her right temple. She was mesmerised at ten o'clock, A.M.; and at half-past eleven, I freely applied muriatic acid to the whole sore, without her showing any sensibility. She awoke twenty minutes after, and knew nothing about it.

Aug. 9th.—Parbuttie, an elderly Hindoo woman, has a sinus extending from the inner ankle, under the calf, to the outer side of the leg near the knee, which is contracted by a dense cicatrix running two thirds round the joint, and involving the hamstrings: the knee has been in this state for ten years. Being put to sleep, a counter opening was made in the leg, and a seton run

through the leg, without her feeling it. I then leant all my weight on the knee, and succeeded in extending it a little, but the diseased structures would yield no farther. A heavier and stronger gentleman then applied all his power, and effected a little more, but it was evident that no force short of breaking the limb could straighten it. But it was equally certain, that any common muscular or ligamentous contraction must have yielded on the spot.—The woman continued to sleep for hours after.

Aug. 23d.—Napaul Bagdy, a husbandman, has a singular fungoid mass in the right groin; it is the size of a small cauliflower, and like it in appearance, the surface being whitish from sloughing. It spreads from a peduncle in the abdominal ring, and bleeds much when handled. His father says that, at his birth, there was only one testis in the scrotum, and no trace of the other was seen till he was six months old, when a swelling appeared in the groin. This gradually increased till his twelfth year, but was not painful or inconvenient. About this time, he was attacked with fever, attended with increased sensibility and increase of size in the tumour, and the paroxysms came on twice a

month, up to June last, when he applied to a barber-surgeon who used means *to ripen* the swelling. In the course of a few days it was punctured, and blood only followed. The opening was plugged as well as possible with a candle covered with cloth smeared with some ointment, but in a few days this came out, and the following day, a fungus shot out of the wound, and daily increased to its present size. It is now a very foul mass, its surface mortified, and the crevices filled with maggots.

Aug. 26th. — He was mesmerised after two hours' trial, and the mass removed without his feeling it.

Aug. 31st. — Discharged at his own request— wound looking well.

Sept. 1st. — Raimgopal, a young Hindoo, has got a high syphilitic sore, about the size of half a lemon, on each side of his nates. He was entranced on the first trial; and in the presence of Dr. Ross and Dr. Sissmore, I turned him round like a log, and cut off both the excrescences level with the skin, then turned him back again, and left him sleeping. It is needless to say he did not feel it.

Oct. 8th. — Nazir, a peasant, aged sixty, has suffered from enlarged and scirrhous testis for four years; the parts are as large as a child's head, and extirpation is necessary.— He was entranced after two hours to-day.

Oct. 10th. — He was mesmerised the second time, to-day, in the presence of Mr. Sutherland, Dr. Owen, the Reverend Mr. Bradbury, Major Riddell, Mr. Higgen, Mr. Muller, Mr. Graves, Messrs. Savigny, Mr. Calder, and Mr. Bartlett.

I removed the parts without his showing any sign of sensibility till the last artery was being tied: he then woke up, but went immediately to sleep again for half an hour, and on awaking, said that he was only conscious of a little pain when he awoke for a moment, and found me to be tying something. He was cheerful and talkative, and showed no signs of suffering or exhaustion in his countenance or manner, and said the pain in the wound was very trifling.

Nov. 20th. — Mohun Dass, a peasant; aged fifty-five: has got a cataract in one eye. He was entranced on the first trial, and I broke down the lens in the presence of Major Smith of H. M.'s 9th Regt., without awaking him.

Nov. 21st. — There is much pain in the eye.

—To be mesmerised, and leeches applied. He slept for two hours with the leeches on, and on awaking, the pain was nearly gone.

Nov. 26th. — Mahes Banergie, a Brahmin, aged forty, has got an enlarged testis, the size of a child's head; it is red, glistening, and very painful, and there is a scrotal hernia above it. He was entranced on the first trial, and I returned the gut into the abdomen, handling the inflamed part very rudely, without his showing the least sensibility. I then, in the presence of Captain D. L. Richardson, dissected out the diseased organ. The operation was tedious, as I had to carefully separate the mass from the hernial sack. He moved, as in an uneasy dream, but did not awake till we were tying the arteries, which were very numerous; he then said, that he had felt nothing till that moment. The muscular movements, sometimes seen, looked more like the contractions induced by cutting a recently dead animal, than the common contortions from pain; and I believe may be avoided by patience, as every trance seems to deepen the insensibility. I need not point out to the surgeon the advantage he would derive from the mesmeric trance, in reducing strangulated hernia, and spasmodic strictures of the urethra.

Nov. 30th.—Mahes, a peasant, aged thirty-two, has got a deep ulcer of a year's standing, at the root of the penis, that penetrates under the pubes; the edges are callous, and prevent it healing. He was subdued in two hours on the first day, and in the presence of Dr. Tritton and a party of officers of the 71st Regiment N. I., I pared off the margins of the sore without his awaking. He awoke a few minutes after, said he had been asleep, and dreamt that some one had pulled him off the roof of a house, and declared that he felt *no pain whatever* at the moment of speaking. I thereupon proposed that he should allow me to cut him a very little, as it would facilitate the healing of the sore, but he would not hear of it. Dr. Tritton and the rest also joined their persuasions; but he implored us for the love of God to let him alone—he would rather die than be cut, that the proposal had already killed him, &c. He was desired to sit up, and his cloth removed; on seeing the altered state of things, he was greatly alarmed and puzzled, and on being shown the pieces of flesh, said they had certainly belonged to him before he went to sleep, and how I got hold of them he had no idea. As I found myself in the company of candid and dispassionate observers, I showed them Mesmerism in all its

physical symptoms, whether directly or indirectly produced, and Dr. Tritton very kindly said at parting, that he was quite convinced of the *reality* of the symptoms from first to last, whether produced by *something*, or *nothing*, and that he now quite understood the "mesmeric disease," and said I was at liberty to say so, if I pleased.

Dec. 1st.— I had the pleasure of receiving a visit from the gentlemen engaged in the railway survey, consisting of Mr. Simms, Captain Western, Captain Boileau, Mr. Fraser, and Dr. Macauley. They found a man entranced, from whom I was about to remove a hypertrophied prepuce. As he appeared to be ready, I commenced at once; but seeing that he shrunk from the knife, without awaking however, I desisted, and proposed to adjourn to the other hospital, saying that this man would probably be ready on our return. We accordingly went, and I requested Dr. Macauley to ascertain if a man brought before us had pain in his scrotum. He said there was no doubt; and the rest were satisfied that there was no mistake about it. I ordered him to be entranced before them, which was easily done, as he had been twice operated on for hydrocele, in the trance. I pulled him up, and set him on his feet

sleeping, before the gentlemen, and begged them to deal with them as they pleased. He was cataleptsed by them in the most painful attitudes, to which he was as indifferent as a man of clay; and Dr. Macauley now squeezed the painful part with as much effect as if the man had been a mummy. I stripped him naked; and when he awoke and found himself standing in the presence of gentlemen in this condition, his look of wonder and shame, if not natural, was most beautiful acting, and he certainly escaped being found out. As soon as he awoke, Dr. Macauley pressed the diseased part, and there could be no doubt about his feelings on the subject; — the pain was evidently instantaneous and acute. On returning to the charity hospital, I removed the enlarged cellular substance from the whole penis; the man now did not shrink in the least from the knife, and slept a good while after the operation. On questioning him, he said that he had been put to sleep to be operated on; but as he was now awake, he would wish it to be put off till to-morrow. We then showed him the liberties that had been taken with him, and he recognised his property; but how it had changed owners he had no conception.

Dec. 21st. — Samoo, a weaver, has got a bad sloughing sore of the prepuce and glans, of a year's standing. — To be mesmerised.

Dec. 22d. — He was mesmerised for two hours yesterday, and slept an hour afterwards, apparently naturally. To-day I saw him after half an hour's mesmerising, when the trance was fully established, his whole body being rigid. As I had not time then, I left him, and returned in an hour, and found his body still stiff. I cut open and took off the prepuce; and finding the glans half eroded, I cut it off too. The man showed no sign of life; the body continued stiff, and the pulse natural. He awoke in half an hour afterwards, and did not discover that any thing had been done to him till he went to make water.

Dec. 29th. — Mahes, operated on last month. The sore is callous, and it will greatly advance his cure to have it pared.—To be mesmerised in my absence. I went on to Chinsurah, and there met the Rev. Mr. Cahusac, and the Rev. Mr. Mullins, who requested to see any mesmeric cases in hand. They returned with me to the hospital, and we found Mahes entranced. I pared the sore, and he did not awake till a quarter of an

hour afterwards. Mr. Mullins, who speaks Bengalee, asked him if he had been disturbed in his sleep. He said "No;" and that the pain was not greater than before he went to sleep.

We found another man entranced, whose elbow had been dislocated for twenty days. I tried to reduce it, using all my force, but did not succeed; he moved uneasily, but did not awake till ten minutes after I had desisted, and then said that nothing had disturbed him.

Dec. 26th.—Goluck Seit, a prisoner, has got a hydrocele on each side. A young Hindoo subdued him to-day in ten minutes, on the first trial. When about to operate, I saw that he possessed a *consecrated nail,* on one of his little fingers; and knowing the value attached to this, I resolved to get possession of it, if possible, as a *moral* test of his being insensible, for he would as soon have cut a cow's throat and eaten a beefsteak as allowed me to cut off his nail, while in possession of his senses. It is a common practice with the Hindoos to vow their hair, beards, or nails to Shiva, the Destroyer, in the hope of averting his anger; and this man had consecrated his little finger-nail to Shiva Forakissore,—Forakissore,

in this district, being a famous shrine of the God. I transferred the sacred excrescence to my pocket, without any remonstrance being made, and then performed the less formidable operation of withdrawing the water, and throwing in the injection, of which he knew nothing, on awaking two hours after. His only distress was the loss of his nail, and he spent hours in hunting for it, supposing that it had been broken off by accident.

Dec. 29th.—I entranced Goluck Seit to-day in five minutes; and in the presence of Mr. Cahusac and Mr. Mullins, operated on the other hydrocele, to which he was as indifferent as on the first occasion. But before putting him to sleep, I showed the gentlemen how painful was the side operated on three days ago; and yet, in five minutes after, he allowed me to squeeze his testicle to any extent, without exhibiting a vestige of uneasiness. I awoke him in half an hour, that Mr. Mullins might question him; and he said that he saw the water was gone, but how it had escaped he had no idea.

Dec. 30th.—Bungsee, operated on last month for a scrotal tumour. The wound, from his debilitated condition, is glazed and callous, and is

wasting him with a useless discharge. It would greatly shorten his cure to pare the sore, and bring it together with deep sutures; but I could hardly bring myself to propose it to a person in his senses, as it would be as painful as the capital operation. Mesmerism, however, makes surgery pleasant to both parties; and having easily entranced him, I pared and shaped the sore very leisurely (it was six inches long, by two deep), inserted the deep sutures, and left him sleeping. He awoke after four hours.

Jan. 2d. — The sutures were taken out to-day, and the sore is adherent throughout.

This power of remedying any defect in the operation afterwards, without inflicting pain, is not one of the least advantages of Mesmerism.

CHAP. VIII.

Hypertrophy of the Scrotum; different Causes of. — Elephantiasis endemic in Bengal and Lower Egypt; probable Causes of. — Example of Malarious Fever. — True Elephantiasis of the Scrotum. — Hypertrophy from Hydrocele; from Syphilis; Condition of the Organs involved; Mode of operating; Mismanagement by the Native Doctors; Number of Operations for Six Years previous to April, 1845; in the Mesmeric Trance, for Eight Months. — First Case. — Some Cause for the late Increase of Cases. — Operations in the Mesmeric Trance.

THIS disease is so common in Bengal, and attains such a magnitude, that it deserves a chapter to itself, in which it will be seen that if Mesmerism cannot prevent it, it is very effectual in assisting its *removal.* These singular, and often prodigious tumours are generally called "elephantiasis of the scrotum;" but, correctly speaking, this is a misnomer, many of them not having their origin in the constitutional affection called elephantiasis, but arising from local irritation and debility of the parts, caused by syphilitic sores, or simple hydrocele; and the appearance of the tumours and aspect of the patients are often characteristic of their respective exciting causes.

In Fig. VI.* will be seen an excellent specimen of the true constitutional elephantiasis, in which the disease is accompanied with periodic fever, and general cachexy to such a degree as to make it unsafe to remove the local excrescence, as in the individual, whose portrait this is. The disease, in this shape, is endemic in Bengal almost exclusively, it being rarely seen in upper India, and appears to have its origin in a hot, moist, malarious, relaxing climate, in which the poor are ill-fed and ill-clothed. In Egypt it is also principally confined to the delta of the Nile, which considerably resembles Bengal in climate and the condition of its people. Endemic sources of disease abound here to a dreadful extent, but chiefly originate in the ignorance, indifference, and poverty of the people; and an enlightened and benevolent government should interfere to prevent its subjects perishing in their ignorance, by enforcing stringent police regulations for the improvement of the public health, especially by attention to drainage and filling up all unnecessary pools of water. Ragged old tanks, and offensive

* For the reasons assigned in the Editor's preface, the plates transmitted from India, as portions of this work, are not published; but remain with the publishers for the inspection of the scientific reader — D. E.

pools and holes of water, form a chain along the roadside, in and near all towns and villages, and spread like a network over the country; their insulation rendering them only the more pestiferous, by making each an independent hotbed of malarious exhalations. The thing is so general, that every cottage may be said to be built over a green putrefying pool, out of which the mud to build the house had been taken, and which is reckoned a *domestic convenience.* Into this all the animal and vegetable *débris* of the houses is thrown: the pigs wallow in it, the people wash their fish and rice, and bathe in it; and it is then used for cooking and drinking, as it is conveniently near, and saves the trouble of going to the nearest large tank, or the river. This accumulation of animal and vegetable matter, festering under a tropical sun, renders every hole a pest pit, and the whole population eat, drink, and breathe perpetual infection. The effects are as dreadful as might be anticipated in a debilitating climate, and among an ill-fed people, and are deeply written in the personal appearance of the natives of the country.

Ague, remittent fever, spleen, rheumatism, diarrhœa, dysentery, and cholera are inherited by the poor people along with their homes; and the

general constitutional debility is evidenced by the incredible frequency of elephantiasis, diseases of the skin, and parasitic growths on the body. Ague and spleen were endemic diseases in Scotland, fifty years ago, when every cottage had its "midden" before the door; and if northern nations suffer so much from miasmatic influences, we can readily imagine their terrible energy in Bengal, where every aid and appliance is afforded them.

I shall give an illustration of the extreme gravity of these causes of disease, from a case that lately occurred in my private practice, and which I am disposed to regard as an acute form of the disease which, in its chronic shape, gives rise to constitutional elephantiasis. On the 16th May, 1845, I was requested to visit one of the richest Hindoo families here; and on going, found eight persons, men, women, and children, labouring under different degrees of the same disease, and of which two men of the same party had died, shortly before. In the worst cases the feet were swollen, and hard as in elephantiasis, and a brick-red inflammation extended half way up the leg, and was still advancing. The others were worn out with fever, and their bodies were generally or partially dropsical. The party con-

sisted of one family and its attendants: no other persons living in the same house were affected. This led me to suspect some local cause of contamination, and I requested to be allowed to view the suite of apartments occupied by this part of the family. The house is a large two-storied pile, in which, as usual, all the family connections live. I could see nothing objectionable about the rooms inhabited by my patients; but, on looking out of the back windows, I saw that the house rose right over a large, ragged, neglected tank, covered with green filth, and smelling vilely, and that this was the only part of the house so situated. I then examined below, and perceived that the water was led upon a brick platform to a passage in the lower story, to save the people from going out: numerous narrow lanes, the sides as high as the house, led from the tank to the different parts of the house, and all opened into the court around which this family exclusively lived in small ill-ventilated rooms. In short, it was a most ingenious labyrinth, contrived for receiving and retaining all the mephitic vapours from the tank, into which were thrown all the "exuviæ" of this large family, or rather clan. This year, it so happened, was peculiarly adapted for the development of malaria; all the tanks in the district

being dried up to the dregs; so that, for months, this large putrid area had been exhaling death among this unfortunate family. The disease, I therefore concluded, was only an aggravated form of the malarious fever that usually ends in elephantiasis and dropsy; the stage of elephantiasis being only more acute than usual, from constitutional peculiarity, or the severity of the disease. Being questioned as to their probability of recovery, I said, that there was little hope, except for one of them, and at this moment (1st Dec.), one only is alive, but not recovered.

The true "elephantiasis" scrotal tumours are excessively dense in the rind, the cells of the cellular membrane being filled with dense fibrinous deposit, that makes it look and cut like half-tanned hide; the skin is black, and the mass is usually studded with tubercles.

Fig. VII. shows well the difference between constitutional and local disease: this tumour, weighing sixty pounds, commenced with hydrocele, and has gone on increasing regularly for the last twelve years, without any disturbance of the system; indeed the man is one of the most robust Bengalees I ever saw, as his portrait shows; and his nervous system was so unbroken, that all our efforts were vain to mesmerise him. I therefore

took it off in the usual way, saving the penis, and on the fourth day the wound had united throughout. In the tumours arising from hydrocele the surface is generally smooth, the skin not discoloured, and the cellular substance is filled with a gelatinous substance, among which the remains of the cells, which have been enormously distended, are perceived.

Fig. VIII. is a tumour thirty pounds weight, of syphilitic origin. 1. is the enlarged prepuce; 2. the opening of the urethra; 3. sloughing sores filled with worms, and it will be seen that the small excrescences are warts, rather than tubercles; the parietes were a compromise between the two other kinds. The patient reported that he had syphilis with buboes, twelve years ago, which was followed, two years after, by hydrocele of both sides of the scrotum, and ever since the enlargement had been going on. He was operated on before I had made the acquaintance of Mesmerism.

This disease sometimes only attacks the skin of the penis; and this organ, in one instance, was as long and thick as a man's arm, and ended in a wart bigger than a fist. An incision was made down upon the penis from the symphysis pubis; and having freed it, the diseased tube was struck

off where it joined the scrotum. I believe that the body of the penis will always be found unchanged and *in situ*, in this disease; the testes frequently unaltered, but very variously situated, and with common expedition, the bleeding allows time enough to save all the organs, if it is thought expedient to do so, in tumours of moderate dimensions. Even when the testes are enlarged, and castration is performed, the spermatic vessels have not their calibre or activity increased (in proof of this, I did not secure them at all in one case); and in general the arterial bleeding is moderate, as might be expected in a disease of a low organisation.

The mode of operating I adopt is as follows:—The penis being always *in situ*, as has been said, it is immediately found by running a bistoury from the opening in the prepuce, wherever it may be, up to the symphysis pubis, and a long *bistouri caché* is a very convenient instrument for this purpose; it is pushed up till it reaches the pubes, and the penis is exposed, at once, by one outward cut. The penis is then easily freed, and a semilunar incision carried from its root across each of the spermatic cords; these are easily found; and if the testes prove to be worth preserving, they are reflected back, the incision is extended down

to the perineum on both sides, and the mass rapidly removed; if the testes are diseased, the whole is removed together. This plan is simple and expeditious; one continued wound suffices for finding the testes, and removing the tumour; and the wound has the advantage of being a gaping one, discharging the blood and water freely, and permitting one to see clearly. By this mode I always secure flaps, which often adhere in four days by the first intention; and even if they partially slough, enough is left to support and defend the testes, as they adhere to some part of the covering. The testes often adhere to the fundus of the tumour, which vexatious complication is generally caused by the natives making deep escars with the actual cautery, in the hope of discussing the swelling by suppuration; but the irritation only accelerates the disease. In these cases the spermatic cords are greatly elongated, perhaps a foot long; and they, as well as the testes, must run great risk of sloughing without any covering and natural support. In my experience, even when the flaps partially fail (I have never seen them do so entirely), they are a great comfort to the patient by the adhesions which the cords and testes form in two or three days.

During the six years previous to April, 1845, I had operated on eleven cases; and in the last eight months, since I began to operate in the mesmeric trance, I have removed seventeen tumours, making in all twenty-eight, varying from a few pounds to eighty pounds; and there has not been a fatal case among them.

The results are—

All the parts saved in - - -	13
One testis sacrificed - - -	6
Both - - - - - -	8
All removed - - - -	1
	28

Of the seventeen operations in the mesmeric trance three only were imperfect, the persons awaking before the operation was finished; this imperfect sensibility was a great comfort to the patient, and gave great facilities to the operator. Here is my first case, and an example of this:—

April 23d.—Bachoo. Saw him for the first time to-day, at 11 o'clock, A.M.: he has got hypertrophy of the scrotum; the tumour is twice the size of a man's head. I put him to sleep, and made his arms cataleptic in three quarters of an hour.

Pricking and inhaling ammonia disturbed, but did not awake him; I therefore proceeded to operate, but he awoke after I had slit up the prepuce. Upon this I desisted, and will try to educate him into insensibility. To be mesmerised daily.

April 27th.—He has been easily mesmerised daily, since the 23d; is not insensible to pricking, but it does not awake him, and I could afford no more time to him. I pulled him by the legs to the end of the table; allowed the tumour to hang down unsupported, and bent his knees, putting his feet on the edge of the table; and in this painful attitude he remained for half an hour, without moving. His legs and arms were then properly disposed of, in case he should awake, and the tumour quickly removed; the first incisions did not awake him, but before I was done he was completely roused.

Since then I have had *every month* more operations of this kind than take place in the native hospital in Calcutta in a year, and more than I had for the six years previous. There must be some reason for this, and I only see two ways of accounting for it: my patients, on returning home, either say to their friends similarly

afflicted, "Wah! brother, what a soft man the doctor Sahib is! He cut me to pieces for twenty minutes, and I made him believe that I did not feel it. Isn't it a capital joke? Do go and play him the same trick; you have only to laugh in your elbow, and you will not feel the pain." Or they say to their brother sufferers,—"Look at me; I have got rid of my burthen, (of 20, 30, 40, 50, 60, or 80 lbs., as it may be,) am restored to the use of my body, and can again work for my bread: this, I assure you, the doctor Sahib did when I was asleep, and I knew nothing about it;—you will be equally lucky, I dare say; and I advise you to go and try; you need not be cut if you feel it." Which of these hypotheses best explains the fact my readers will decide for themselves. It ought to be added, that most of these persons were not paupers, but people in comfortable circumstances, whom no inducement short of *painless* operations could tempt to enter a charity, or any other hospital; and all who know the natives are aware of this.

I have said that only three out of the seventeen awoke before the operation was finished; I will not inflict the whole fourteen completely successful cases on the reader, but only present some of the last.

Sept. 2d. — I was stopped on the road to-day, and requested to go into a temple to see a sick Fuqueer; on entering I found a healthy-looking man of sixty, but he was nearly blind from cataracts, and had a scrotal tumour of about thirty pounds' weight, which he begged me to remove. I examined it, but gave no opinion, and said I would consider of it; I then went on to Chinsurah, to see Dr. Ross (in charge of the troops there), to whom I said, that if he chose to return with me, I would try to show him a mesmeric operation. He consented, and in passing the Fuqueer's house we carried him with us to the hospital. The cook of the hospital, one of my best mesmerisers, was set upon him, and in half an hour made him insensible. Considering the man's age and the size of the tumour, we did not think it worth while to attempt to save the testes, and the operation was therefore speedily done. The man never moved, and did not awake till after the last artery was tied. Seeing him about to awake, he was covered up, and asked if he had been in any way disturbed; he said, "No." He was then desired to sit up, and show me the tumour, as I wished to examine it; he did so, and actually put his hands under it, to raise the mass as usual; his look of amazement, on missing it, was some-

thing not to be easily forgotten. Dr. Ross published an account of this and other operations in which he assisted me.

Oct. 22d. — Muffur Dass, a peasant, aged forty. He was made insensible on the third day of mesmerising; and in the presence of Mr. Reid, the collector, Mr. Wauchope, the magistrate, and Mr. Bennett, superintendent of Excise, I removed a tumour weighing eight pounds, without the man being disturbed; although the operation was tedious, from the testes having contracted adhesions. I succeeded in saving all the organs; he awoke soon after it was all over, said he felt no pain, and was quite ready to be operated on *now*.

Oct. 25th. — Gooroochuan Shah, a shopkeeper, aged forty. He has got a "monster tumour," which prevents him from moving; its great weight, and his having used it for a writing-desk for many years, has pressed it into its present shape. His pulse is weak, and his feet œdematous, which will make it very hazardous to attempt its removal; but with such an appendage life is literally a burthen. He became insensible on the fourth day of mesmerising, and was drawn with the mattress to the end of the bed (my usual mode of

proceeding): two men then held up the tumour in a sheet, pulling it forward at the same time, and, in the presence of Mr. Bennett, I removed it by a circular incision, expedition being his only safety. The rush of venous blood was great, but fortunately soon arrested; and, after tying the last vessel, the mattress was again pulled back upon the bed with him upon it, and at this moment he awoke. The loss of blood had been so great that he immediately fell into a fainting state, and it took a good while to remove him. On recovering he said that he awoke while the mattress was being pulled back, and that nothing had disturbed him. The tumour weighed eighty pounds, and is probably the largest ever removed from the human body. I think it extremely likely that if the circulation had been hurried by pain and struggling, or if the shock to the system had been increased by bodily and mental anguish, the man would have bled to death, or never have rallied from the effects of the operation. But the sudden loss of blood was all he had to contend against; and, though in so weak a condition, he has surmounted this, and gone on very well.

Dec. 1st. — Has been allowed to go home at his own request: the wound is filling up slowly, for want of integument.

Oct. 27th.—Rammohun Sunokur, a jeweller, aged forty-four, has got a large tumour. He became insensible on the fifth day, and I removed the tumour in the presence of Mr. Wauchope and Mr. Bennett. The bleeding was violent, and the testes adherent to cicatrices from burnings: I was therefore obliged to sacrifice them. About the middle of the operation he gave a cry, but did not awake till twenty minutes after it was over, and then said, that he wanted something to eat, as he felt empty. He said that he had slept well, and was not disturbed in any way; that he was now ready to be cut, but begged to be allowed to get his dinner first. The mass of flesh was now shown to him, which he recognized with amazement; thanked the gods, and said it would weigh twenty-four pounds, probably,—it weighed thirty pounds.

Nov. 2d.—Gobinchunder Lane, aged thirty-two, a shopkeeper, and a very fine handsome man, is afflicted with the same disease.

At three o'clock yesterday, when passing the hospital, I was told that another man had come with a tumour, since my morning visit, and had been entranced. I went to see him, and found him still in a fit state to be operated on, although

he had been asleep for four hours — to be mesmerised again to-morrow, at ten o'clock.

Nov. 3d. — The operation was performed to-day, at twelve o'clock, in the presence of the Rev. Mr. Bradbury, and Mr. Bennett. As the bleeding was moderate, and the man perfectly passive, I tried to save all the parts, although the testes adhered to the sides of the tumour, which were very thick. It was twenty minutes before all was over: not a sign of life appeared, and the organs were all saved.

Before commencing, I put his arm erect in the air as an "*oudanometer:*" it never even trembled, was quite stiff at the end of the operation, and had to be taken down. He awoke just as the mattress was re-adjusted, and said, "It is done!" Being asked how he knew, he said, by seeing me bloody, and the people all standing round, but that he had felt nothing, and had little pain now. The excrescence weighed twenty-five pounds.

Nov. 16th. — Ameer Mullick, a coolly, aged fifty, has a large tumour of twenty years' growth. He was mesmerised for the second time to-day, and, in the presence of Mr. S. Palmer, and Dr. Scott, I dissected out, and saved all the organs. The operation was tedious, on account of old

adhesions; but he did not awake till some time after it was finished, and then said, that nothing had disturbed him—the mass weighed thirty pounds.

Nov. 18th.—Bungsee, a peasant, aged fifty-five, has a tumour which weighed twenty-eight pounds, when cut off, and has existed for nine years. He was entranced on the second day, and I removed it in the presence of Mr. Russell, Judge of Hooghly, Major Smith, H. M.'s 9th Regiment, Dr. Scott, and Capt. Smythe, of the Engineers. I found all the organs, and showed that the testes were atrophied and useless: they were therefore sacrificed, and the man never moved, or showed a sign of life, till ten minutes after the operation, and he then said, that he was quite ready to be operated upon.

In concluding this practical part of the subject, I beg to state, that I have seen no bad consequences whatever ensue from persons being operated on in the Mesmeric trance. Cases have occurred in which no pain was felt, even subsequent to the operation, and the wounds healed by the first intention; and in the rest I have seen no indication of any injurious con-

sequences to the constitution. On the contrary, it appears to me to have been saved, and that less constitutional disturbance has followed than under ordinary circumstances.

In my early operations, I availed myself of the first fit of insensibility, not knowing whether I could command it back at pleasure; and when the Coma is deep enough on the first occasion, it is probably best for the patient that it should be taken advantage of, as the fewer liberties we take with Nature the better, the rule being never to do more than enough. But if the trance is not profound the first time, the surgeon may safely calculate on its being so the next, and, when operating in public, it is prudent to take the precaution of a preliminary trance or two. I have already said, that flexibility of the limbs, till moved, and their remaining rigid in any position we leave them in, is characteristic of the trance: but there are exceptions, and these are equally diagnostic and to be depended upon. It sometimes happens that the limbs become rigid as they lie, and, on bending them, they are not passive and plastic, as in the first kind of catalepsy, but the muscles always tend towards a spasmodic extension of the limbs: at other times, there is a complete relaxation of the whole mus-

cular system, and the arms and legs can be tossed about without resistance, like those of a person just dead. The eyes are usually closed, but the eyelids are sometimes seen a little separated, or half open and tremulous; and the eye is even seen wide open, fixed, and the pupil dilated. On one occasion, having ordered a man to be entranced, I returned in two hours, and was told by my assistant that he was not affected: I went to see, and found him with half open eyes, quivering eye-lids, and trembling hands. I immediately said the man was ready, and, without testing his condition farther, performed on him a tedious, but painless, operation.

I also wish to remark, that I have seen no indication of congestion of blood on the brain; the circulation, while my patients were in the trance, being natural, like that of a sleeping person. Those I operate upon appear to escape the stimulating stage of the mesmeric influence altogether, and to pass at once from life to temporary death; and this I am disposed to attribute to the concentrated uninterrupted manner in which the power is applied; as soon as it is felt, there is no time given to the system to rally round the first impression, and it succumbs, without a struggle, to the constraining influence. Some patients, when

suddenly awoke, say that their vision is hazy, and their heads light, but I take this to arise from the imperfectly recovered sensibility of the brain and organs of sense, which are not at once roused up to the full possession of their waking powers; just as is seen in persons suddenly aroused from profound natural sleep. That the mesmeric torpor of the nerves and brain does not arise from sanguine congestion, is often strikingly and beautifully illustrated by the first actions of persons suddenly awoke from the trance. They open their eyes wide, and at the same moment their faculties are restored, but it is seen that the pupil is dilated, and insensible to light: this they also immediately become aware of; they know that their eyes are open, and that they ought to see, but do not. The thought fills them with horror, and, with a fearful cry, they bury their faces in their hands, like persons struck blind by lightning; but this soon passes off, and the retina recovers its sensibility, by a little rubbing of the eyes.

For any person to see this, or even hear of it from a credible quarter, and still talk of imposture, is to convict himself of an incurable moral blindness, which it would be folly to attempt to dissi-

pate by experiment and reasoning: — "none are so blind as those who *won't* see."

The dreadful shock given to the mind under such circumstances, or when a somnambulist awakens and finds himself perhaps standing naked among strangers (an experiment I have often made), is a trial of the nerves, to which it would be very imprudent, and unsafe, to subject any but such singularly impassive beings as my patients: — sometimes, however, it is too much for the nerves of a coolly even. In highly nervous and irritable constitutions the effects might be most disastrous both to mind and body; and I would not dare to take such liberties with European temperaments. This, and the dangers and inconveniences of inducing the "Mesmeric Disease," by practising on the system *more than is necessary for the cure of disease*, appear to me to be the real dangers to be avoided in the use of Mesmerism as a remedy.

I am now able to say from experience, that debility of the nervous system predisposes to the easy reception of the mesmeric influence; and I argue favourably of the patient's powers of submission, when I recognise in him the languid listless air that characterises functional debility of the nerves.

As I never have attempted, and never will attempt, to mesmerise people in health, I cannot speak from my own experience as to their mesmeric sensibility; but we are assured by the best authorities that many persons in health can be subdued, and my experiments go to support this. My patient Mrs. —— had not a toothache even when she was mesmerised, in order to prepare her for the dentist; and many others suffered only from some local complaint, that did not apparently impair the powers of life. The fact is sufficiently established; and experimenting on the healthy ought to be discouraged, as it is only undermining healthy constitutions for no possible advantage. The artificial disease is not so transitory or light a matter as it seems to be reckoned by many Mesmerisers, who go about upsetting the nerves of every one they can lay hands on. In proof of this I may mention, that after prisoners have been working on the roads for two or three months, I have found them still as much under my command as ever.

It is proper that ladies and gentlemen who beg to be mesmerised for fun should know this; and then they will probably choose some other kind of amusement.

CHAP. IX.

Curiosities of Mesmerism.—Unsatisfactory Nature of Public Exhibitions. — Apology for giving one. — Account of it by a Visitor. — The Modes in which the Mesmeric Fluid can be transmitted.—It acts at great Distances.— Is absorbed by Water.— Can pass through a Wall. — Final Experiments.

My original intention was to confine myself strictly to an examination of the medical pretensions of Mesmerism, and to eschew all but the practical part at present, and thus open the minds of men to a reception of new truths, by the key of self-interest. Not that I was, by any means, indifferent to the philosophic and extra-professional bearings of the subject, but because I saw that the gross and palpable bodily phenomena, even, were more than the public stomach could bear, and I did not intend to serve up all my mesmeric stores, till the public had digested my first course of facts that cannot be denied.

But accident, if it does not determine, generally shapes our actions; and (as in my accidental *rencontre* with somnambulism) I have been driven, by the force of circumstances, out of the

prudent mesmeric course, which I had resolved to follow.

But as the "*utile*" has not been sacrificed to the "*dulce*," I hope to be pardoned by the stern utilitarian reader for devoting a chapter to the "*Curiosities of Mesmerism.*"

Knowing the worthlessness of public exhibitions for effecting a general conversion to the truth of Mesmerism, I was very averse to subject it to this unsatisfactory ordeal, and determined not to be made a showman of. All performers in public are not unnaturally suspected to take insurances from Art, in the event of Nature failing them; success on such occasions being thought to be more indispensable than truth. Besides this natural distrust of public displays, the really careful and intelligent observer has not the necessary means of close inspection, required to convince him beyond a doubt, and the mere sight-seer is only bewildered, and declares it to be "all humbug," because all beyond his comprehension. But in our present state of ignorance it is as absurd to pretend to set limits to the *possible* in any unexplored region of Nature, as it would be for the inhabitants of an ant-hill in the plains of Bengal to decide authoritatively against the possible existence of the Himalayahs. I had acted with

considerable consistency for some months, in confining my public mesmeric experiments to purely professional subjects; but a very general curiosity was excited, and I was at length requested, from a high quarter, to gratify some of the inhabitants of Government-House with an especial mesmeric "*Séance.*" This I could hardly have refused without appearing churlish; and it would have been said that I shunned the light, because my proceedings would not bear inspection. I therefore thought it best to submit to a necessary evil, and make the most of it, by converting an exclusive party into as general and promiscuous a meeting as possible. It was therefore pretty generally made known, that all the curious might be gratified *for the first and last time* on the 29th of July. Accordingly on that day I had the honour of meeting a large assemblage of Europeans and natives at my hospitals; and as a letter appeared in the newspapers the day after, giving an account of all that was done and seen, I here insert it, as it was generally allowed to give a correct account of all that happened, and mentions the points I wish to make some observations on. Six medical men were of the party, and one of them publicly acknowledged the faithfulness of the report sent to the newspapers.

PUBLIC DISPLAY OF MESMERISM AT HOOGHLY.

To the Editor of the Englishman.

"Sir,—I esteem myself fortunate in having been present at an exhibition of the powers of Mesmerism, given by Dr. Esdaile, yesterday, to satisfy public curiosity, as it is the last opportunity of the kind likely to occur, Dr. E. having, for this once only, consented to mesmerise for non-professional purposes.

"The party was very numerous, two steamers having brought the curious from Barrackpore and Calcutta; and there was a large assemblage of the European and Native residents of Hooghly and Chinsurah.

"The hospital we first went to was unfortunately small, and the room too much crowded for one to see all that was done; but what escaped me will be supplied by others, I hope, as it is desirable that all the proceedings of the day should be clearly laid before the public.

"On entering the hospital, we saw two men extended on beds, with their native mesmerisers hanging over them; but I had no time to examine their process, as Dr. Esdaile proceeded to business. He said that these two men were

now under the mesmeric influence, to what extent he did not know; that they required to be operated on, and that he would do so, if they were found to be insensible.

"The first man awoke on being pulled, and called upon by name; so he would not do. The other, an elderly man, the Doctor thought was in a favourable state, and he immediately did what was needful; it is needless to say what, but every one was sure that it was very painful. The first cuts did not seem to annoy the man, but he awoke, and cried out before the operation was finished, which was in a couple of minutes I suppose. The mesmeriser was desired to continue his efforts, and I saw him breathe on the head, and place both his hands at the same time on the pit of the stomach; Dr. E. explaining that he often succeeded in restoring the trance, although broken to this degree. And sure enough, in a few minutes, the man became perfectly senseless, to all appearance, and every body was allowed to examine and experiment upon him for the whole time we remained here; and as I believe there were several medical men present, making active observations, I hope that they will favour us with the results of their investigation. We were now agreeably surprised by the appari-

tion of two lady philosophers, and the Doctor had to give them his attention, and certainly made them an offer they will not receive every day, for he begged them to choose whether they would prefer to see a woman made senseless by mesmerised water, or through the wall. The wall was declared for, and the woman's face turned to it sitting upon her bed.

"The Doctor disappeared, and what he did, I know it, but some went to see: whatever it was, the woman soon began to nod, and then fell down on her bed, her eyelids twinkling in a strange way, and she paid no attention to what was said to her. Dr. E. now returned from his ambuscade, having been absent for about five minutes, and pointing to the quivering eyelids, said, that this was very characteristic of the mesmeric state, and that it would be seen that this woman could not open her eyes without his assistance. After blowing in her eyes to restore her senses, she was desired, and then ordered, to open her eyes, and strained violently to do so; but the eyelids looked as if gummed together, and she could not separate them. She then, on being urged still farther, pulled the lids asunder, but they instantly closed again. Dr. E. now rubbed her eyes, and blew into them, and she immediately awoke, but in a

delirious state, and arose to walk, muttering and staggering about in a singular manner; and on being taken back to bed, she fell into a deep sleep, which usually lasted four or five hours, we were told.

"We were next addressed by Dr. E., who said that he would now show us that the mesmeric power was not so rare and singular a gift as was imagined, but a general law of Nature, which might be evolved by most people who took the necessary degree of trouble; and to prove this, he would desire one of his hospital assistants to mesmerise a woman across the room, a distance of thirty feet, I should think. The woman was placed with her back to the wall, and a young man placed himself before her, at the other end of the room. In a very short time she acted exactly like the first woman; her eyes began to twinkle; she swayed from side to side, and then fell down in a trance, from which no one could awake her—not even the doctors, who again examined the man who had been operated upon before leaving, and no one succeeded, I believe, in extracting a sign of sensibility.

"We were now requested to go to another hospital, where there was more space for the company. We found it to be the Jail Hospital,

where there was ample accommodation for all, — the party having tailed off considerably.

"Dr. E. said that he would attempt to show, in a more striking manner, the great distance at which the mesmeric influence could be felt. A man was brought in, and made to sit on the floor with his back to the wall, and the Doctor sat down opposite him at the other end of the room, which I afterwards measured, and found to be eighty feet long.

"We all congregated at the other end to watch the effects of this 'Long Range,' and I heard some good jokes cut, about keeping out of the line of fire, and the danger of the gun bursting, &c.

"The Doctor had proved his gun however, I suppose, as he very coolly and steadily took aim at his man, keeping his hands extended, and moving them across his face, and from head to foot. I could distinguish no sensible effects for ten minutes, and I imagine he became impatient, as he took a look at his opponent through an opera glass, and then desired him to to rise, to judge of the effects I presume. The man obeyed with great difficulty, and his tormenter, taking another look through his glass, appeared to be satisfied with his work, as he cried

out to us to prevent him from falling, and not unnecessarily; for the patient trembled violently, and had to be supported. The operator now bid us move his arms, and seeing them remain in any position they were left in, declared him entranced, and being asked if we might now touch him, he called out — 'Oh yes! do what you please.' He now fell into the Doctors' hands principally, and I hope they will report the results of their criticism. I saw, however, that the man was quite insensible, and his limbs cataleptic; and that no one could excite his attention. Dr. Esdaile sat all this time alone, at the other end of the room, apparently enjoying, through his glass, the mischief and perplexity he had created. After we had extracted all we could out of this mesmeric condition of the body, Dr. E. joined us, and set about restoring him to some degree of sensibility by rubbing and blowing in his eyes. He now half opened his eyes, and followed the Doctor when led, into the middle of the room; but like a drunken man, and care had to be taken, lest he should fall. Dr. E. said that he would now convert him into an imitating machine, with only sense enough left to hear and obey his orders, without the power of answering questions; reflection being quite

dormant. Having cleared up his brain a little more, and attracted his attention by repeating the key note several times, the performance proceeded. He was ordered to do what the Doctor did, and certainly obeyed his orders most exactly, throwing himself, on the instant, into every attitude of the mesmerist, and the very scientific manner in which he took a landsman's 'sight' did great credit to his astronomical powers; no omnibus cad could take the longitude of an obnoxious passenger in a more artist-like manner. His mode of cocking his eye and of applying his first digit to the side of his nose, was also much admired, and proved that he was 'wide awake,' as some thought, all the time.

"His instructor next ordered him to repeat whatever he said, which the pupil obeyed by repeating *the order*.

"He now showed himself to be a patriotic and loyal British subject, by the animated and hearty manner in which he repeated, 'Ye Mariners of England,' and sang, 'God save the King.' This was followed by 'Hey diddle diddle,' in capital style. And here a curious incident occurred; the spectators could not restrain their laughter, in which the singer joined

in full chorus, and some said, 'He can't help laughing himself.' Upon which Dr. Esdaile stopped his performance, and pointed out that they were labouring under a mistake who supposed that *he* was laughing; the fact being that he was only imitating them, or rather Dr. E., who was laughing "*Gorge déployé;*" and this, I think, must have been evident to all. But the farce was nearly converted into a tragedy; for on being ordered to show how the natives fight with sticks, he began very skilfully; but on bending forward to make a blow, he pitched head foremost into Dr. E.'s breast, and both rolled upon the floor. This actor's powers were clearly exhausted, and he was left in an intense trance on the floor.

"It was intimated that the next scene would be 'A Mesmeric interview; or the dangerous effect of getting on the wrong side of the wall;' and two men were brought in, and placed one in each corner of the room. Two lads were then despatched to work the will of the magician, who remained with us. This time, I was resolved to see both sides of the wall, and going into the adjacent room, I saw the two youths standing with their foreheads against the wall, opposite the men, and holding their hands

extended under their mouths. In five minutes, the lads were desired to desist, and on returning to the large room, I saw the men had been turned round, and were standing perfectly rigid in their corners with their arms crucified against the wall, and in this transaction Dr. E. was no more concerned than I was. The Doctors again took possession of the victims, and I had afterwards an opportunity of taking a pull, and giving a pinch, but took nothing by my motion any more than the rest.

"Our entertainer then proclaimed that the concluding piece would be the sleeping water, or the 'veritable *eau merveilleuse*.' He said that when we saw its effects, he hoped that he would be justified for not showing in public how it was made, as it was not fit for the public to know, but that he would be happy to explain the process for the purposes of medicine and philosophy. To guard against all imposition, two Clergymen, and two Doctors, were deputed to see the water charmed, and in a few minutes half-a-dozen lads entered, each carrying a gallipot in his hands, the contents of which (certainly, to all appearance, water) he administered to eight men who were brought from the hospital.

"This was a bold undertaking, for the people

were scarcely permitted to lie down before they were cuffed and kicked unmercifully, many of the company making a vigorous use of their understanding in this way.

"A few minutes comparative quiet having been procured to some of the sleeping candidates, the result was, that four out of eight were found to be cataleptic, and several were converted into somnambulists.

"I have thus endeavoured to give an account of what was done and seen by all; but in so large a field of observation, much must have escaped me, and each person will have something distinctive and characteristic to narrate. The medical men seemed to be wide awake, and availed themselves of the opportunity; and if they have not made up their minds, it is for no want of subjects. Trusting that they will give the professional details, which I cannot supply,

"I am your obedient servant,

"A Mesmeric Visitor.

"Calcutta, 30th July, 1845."

It is not merely a matter of curiosity to ascertain whether the mesmeric fluid can traverse air, and denser substances, to what distance it can be transmitted, and what circumstances assist or

retard its operation. These are all questions of great interest to the Natural Philosopher, as, by ascertaining them, he will probably detect analogies and affinities between the mesmeric fluid and other better known natural powers, and perhaps prove that it is only a modification of an inorganic agent, or a combination of several, to meet the wants of animal life; and the philosopher will naturally look to the physician for his facts, in a matter with which the latter is most conversant.

If there is a transmission of some vital product from one person to another, it must pass undeteriorated through the air, for the bodies are not in contact, and the effect, in the first instance, can be produced at a distance of an inch or several feet, and the interval can be increased to a wonderful degree in proportion to the sensibility developed by frequent trials. An intervening *inch* of air between the two bodies being proved to be no obstacle, it is in vain to dogmatise about the possible extent of the mesmeric sphere of action; if we wish to ascertain this, it must be by actual experiment. In acting upon persons, through the air, without any gesticulations, and by the agency of water, we can make an experiment without exciting the smallest suspicion, and

when these are frequently successful in *first trials*, I should think that it must be considered conclusive proof of the transmissibility of the mesmeric fluid by these media. The possibility of affecting persons in this way had never been dreamt of by my assistants; and it is needless to insist on the impossibility of my patients knowing any thing about it: — in a word, no human being could divine my intentions when I made my first attempt to mesmerise at a distance: I had not determined when or how to try it, and this was decided by an accidental favourable opportunity.

In the women's ward, there is a row of pillars in the centre of the room, and it happened one day that, while leaning against the centre pillar giving some orders, I saw that the beds of the women Nobee and Alunga were on either side of me, in front, at the distance of four or five yards. The women were both sitting up in bed with their faces towards, but not looking at, me; and I seized the lucky moment to open my masked battery upon them. I first turned my looks on Alunga, and simply made her the object of my exclusive attention; her eyelids soon began to quiver, and in a few minutes she acted precisely in the manner described by my "Mesmeric Visitor." I then turned to Nobee, and she

succeeded equally soon in *her way*, which never partakes of excitement; she only becomes lethargic, and passes, at once, into mesmeric sleep; and this has been done subsequently to these and other patients, by all kinds of persons, often in my absence, and as readily as by myself. The experiments have been so numerous and unexceptionable, that I must consider the transmission of the mesmeric fluid through a large body of air to be incontestably proved. This being the case, the permeability of denser materials by it might be pretty confidently expected; and he must be a person of a cold imagination, who, admitting the passage of the vital fluid through the impassive air, yet stops short at a *wall* as the "ultima Thule" of his mesmeric belief, and declares all transmural agency to be *impossible!* Mineral magnetism finds no obstacle to its progress in the grossest textures, and traverses the earth from pole to pole; electricity finds its way as easily through the walls of a house as through the ambient air; and why subtile animal fluids should not be endowed, in a modified degree, with such qualities, I do not understand: it seems they must be condemned to lose their very essence probably, to gratify *our* notions of the fitness of things! But it is in vain that we presume to prescribe a course to Nature, and hedge

her round with dogmas, in order to maintain our infallibility: the "Sacred College" was rapidly revolving through space, while its learned members were constraining the earth to remain a fixture by a "Senatus consultum," as had been determined by the wisdom of the schools; and the mesmeric fluid will, "like a chartered libertine," not only permeate the air, but also probably pass through walls, let its opponents oppose its progress by what arguments they please. In coming to this conclusion, I only rely on *first trials* also, and their results have been as positive and striking as any I have recorded. I have shown that a person whose system has been deeply imbued with the mesmeric action, will sometimes become entranced by merely turning his face to the wall, and leaving him quiet for a few minutes: all the account that such a mesmeric victim can give of himself is, that he feels a coldness and numbness in the limbs, a sense of weight in the back of the head, and an unconquerable heaviness of the eyelids before he goes to sleep. But I can hardly imagine that this spontaneous mesmeric paroxysm took place in *all* the numerous first trials we have made with new subjects, who had never been placed against a wall before, and to whom this position could not therefore be a source of excite-

ment. I acknowledge the *possibility* of some of these being cases of independent Mesmerism, as the constitution, to be affected in this manner, must be deeply tainted; and something unusual was certainly done to them. To solve this doubt effectually, I have of late been looking out for a *blind* man, and one has luckily presented himself within the last few days. I have experimented on him solely for the purpose of determining the points in question, more particularly by the wall problem; and if this supplemental evidence should be still in any part open to objection, I shall be happy to repeat the examination on other blind men, till the evidence shall be considered perfect. In the mean time, I must declare myself almost satisfied, but hope that I shall be the first to change this, or any other opinion here advanced, whenever contradicted by new facts.

Dec. 14th. — Janoo, a blind prisoner; he has got cataracts in both eyes, and can only distinguish light from darkness. I placed him on a stool before me to-day, and entranced him in ten minutes; I then roused him up a little, and made him a somnambulist; he walked with great difficulty, and while doing so said he was fast asleep in his bed. He very soon became unable to

support himself, and fell into the trance, in which he remained for two hours.

Dec. 15th. — When sitting in the middle of the room to-day, I went and looked steadily at him from outside the window; in less than ten minutes I knocked him on the head and toes with a long bamboo, and he was quite insensible. On trying to make him walk to-day, I found there was a total dissolution of the muscular system; when placed on his feet he immediately sunk down all in a heap, and on trying to awake him it brought on an alarming fit of convulsive sobbing; on being put to bed it ceased, but again returned on my renewing attempts to awake him; he slept for more than two hours.

Dec. 16th. — I sent the Sub-Assistant Surgeon to the Jail Hospital, desiring him to get the man placed with his face towards the wall, but not touching it; to take care not to excite his attention, and to keep him engaged in conversation. I followed, and placed myself opposite him on the other side of the wall, leaning my forehead against it, and extending my hands under my mouth. In ten minutes I went to see what was done, and found him conversing in a lively manner with my Assistant: returned, and gave him five minutes more; went to see again: found them still talk-

ing, but in about two minutes he ceased to answer, and burst into a fit of convulsive crying: I now pulled him by the hair, and he fell back like a person just dead: slept for three hours.

Dec. 19th. — Mr. Samuells, the collector of Burdwan, being with me to-day, I took advantage of his presence to give this man his first dose of mesmerised water. This was prepared in a different room, and sent to him by a prisoner who usually administers the medicine, and he was ordered to give it as such; in two or three minutes he was completely insensible.

Dec. 20th. — To-day I saw him sitting in front of the cook-room, eating his dinner, and thought it a good opportunity to observe, unperceived, the extent of his blindness. The cook-rooms are about a hundred yards long, and there is a low wall in front, over which one can look kneeling: he was near one end, and I entered at the other, proceeding till I came opposite to him, when I carefully observed him over the wall. He had nearly finished his dinner; and all his looks and actions convinced me that he only knew the difference of night and day. After he had washed his hands and mouth he sat chirping in the sun, as it was very cold, and seemed to feel quite comfortable; he occasionally called on some one by name, and,

if answered, cracked a joke with him. I now left my ambush, and seated myself opposite to him in the open air at the distance of twenty yards; in about a quarter of an hour he raised one arm, rested his elbow on his knee, and leant his head on the hand; immediately after he supported his head on both hands on his knees, and swayed a little to one side; the inclination gradually increased (he never making an effort to rectify it) till he lost his balance, and fell head foremost into the puddle of water he had made in washing himself; his attitude was not in the smallest degree changed, and he looked like a sitting statue reversed. He was carried to bed; awoke after three hours, and asked how he had got there.

Dec. 26th.—I saw him sunning himself in front of the hospital to-day, and seated myself on the ground opposite him at the distance of thirty yards; in less than five minutes he leaned to one side, and then fell as if shot: slept for two hours.

From the foregoing facts it is allowable to conclude, I hope, that Mesmerism is a natural power of the human body.

That it affects directly the nervous and muscular systems.

That in the mesmeric trance the most severe and protracted surgical operations can be performed, without the patients being sensible of pain.

That spasms and nervous pains often disappear before the mesmeric trance.

That it gives us a complete command of the muscular system, and is therefore of great service in restoring contracted limbs.

That the chronic administration of Mesmerism often acts as a useful stimulant in functional debility of the nerves.

That as sleep, and the absence of all pain, is the best condition of the system for subduing inflammation, the mesmeric trance will probably be found to be a powerful remedy in local inflammations.

That the imagination has nothing to do with the *first* physical impression made on the system by Mesmerism, as practised by me.

That it is not necessary for the eyes to be open: I always shut them as a source of distraction; and blind men are as readily mesmerised as others.

That water can be charged with the mesmeric

fluid, and has a powerful effect on the system when it has been previously affected.

That the mesmeric influence can be transmitted through the air to considerable distances, and even pass through dense materials.

APPENDIX.

When speaking of Somnambulism, I ventured to express my belief that "Clairvoyance," or the transference of sense, had been witnessed in diseased states of the body, and that, as we can imitate Nature step by step, by artificially producing Somnambulism, Catalepsy, and a state of the system resembling Hysteria, in which "Clairvoyance" has been witnessed as a symptom in disease; so we might expect to see this phenomenon in the analogous derangements of the nervous system brought about by Mesmerism. It ought to be remembered that this is one of the wonders of Nature, and also, a great rarity in art, and must not be looked for, as a matter of course, in persons under the influence of Mesmerism. It has not yet fallen under my observation, and from want of books, I could not present the reader with as many well-attested proofs of its existence in Nature as was desirable.

After the foregoing work was finished, I fortunately met Professor Wienholt's "Lectures on Somnambulism," and, as I there found all the facts required to establish the existence of natural Clairvoyance, and, in the notes of the learned translator, Mr. Colquhoun, a parallel array of these "stubborn things"

in proof of the truth of Mesmeric Clairvoyance, I hope the reader will be glad to have this additional aid to his judgment in coming to a decision. Professor Wienholt, in describing natural Somnambulism, says:

"The sleep-walker, when otherwise healthy, falls, at a particular period, into a common sleep, which cannot be distinguished from the natural state of repose. After a longer or shorter time he rises from his couch, and walks about the room—sometimes about the house. He frequently goes out into the open air, walks upon known or unknown paths as quickly, and with as much activity and confidence, as in his waking state, avoids all obstacles which may stand, or have been designedly placed in his route, and makes his way along rugged paths, and climbs dangerous heights, which he would never have thought of attempting when awake. He reads printed and written papers, writes as well and correctly as in his waking state, and performs many other operations requiring light and the natural use of the eyes. All these actions, however, are performed by the Somnambulist in complete darkness as well as when awake, and, generally, with his eyes firmly closed. I shall afterwards speak of the exceptions, in which these persons have their eyes open. When the period of his somnambulism has elapsed, he returns to his bed, falls back again into his natural sleep, awakes at his usual hour, and, in most instances, knows nothing of what he had done in his *sleep-walking* state. At the same time, there are very few persons who exhibit all of these phenomena, or even the greater number of them. For the most part, they only wander about

without any other peculiar manifestation; and the instances in which several of the phenomena in question are exhibited are rare. This state, which is found in persons otherwise healthy, frequently occurs in diseases, especially in diseases of the nervous system. In the latter case, the affection usually commences with a paroxysm of convulsive motions, catalepsy, apparent syncope, and then passes over with a state precisely similar, so far as regards the principal symptoms, to Somnambulism; only that in this latter case, the patients not only act, but speak, which rarely happens in the former. Before these patients are completely restored to their ordinary waking state, their sleep is changed into a similar convulsive state, combined with want of consciousness.

"Of this species of Somnambulism occurring in nervous diseases, we are in possession of many curious instances, of which the Aulic Councillor Meiners, a celebrated professor at Goettingen, has inserted several very remarkable examples in his instructive collection. In respect to its chief characteristics, this species of Somnambulism, occurring in nervous diseases, completely resembles the natural crisis; it is recognised by all competent judges as of the same kind, and is comprehended under the same class of diseases; and in this view I also consider it. I begin with the case in Moritz's Magazine, which was first translated by Mr. Spalding, and afterwards inserted by Meiners in his collection. This is a case of what has been called 'louping ague,' which, unquestionably, is just one instance of that species of Somnambulism which I have referred to as occasionally accompaning nervous

diseases. The patient was a female of sixteen years of age. The paroxysm attacked her in the morning, and consisted of a profound sleep. In this state, she would jump with astonishing activity upon tables and chairs, run, when permitted, and with great rapidity, out of the house,—generally to a particular place in the neighbourhood; and when she did not awake, she would return immediately, but sometimes by a different road, and in a different direction. She not unfrequently left the high road, and ran straight through the fields. She never fell nor injured herself, however rough her path might be, or however fast she might run; and her speed was sometimes so great, that her much stronger and more active brother could not keep pace with her. She frequently mounted upon the garden wall, upon the uneven top of which she continued to run; nay, she even went upon the edge of the house roof without once stumbling, much less falling. *During all these hazardous operations, her eyes were fast closed, and she appeared to be deprived of all her other senses.*"

The second volume of Moritz's Magazine contains the history of a boy of nine years of age, who frequently fell into a species of Somnolency, during which he was capable of carrying on a conversation. *His eyes were fast closed, but, notwithstanding of this circumstance, he saw and named all objects that were presented to him.*

A very remarkable case was related to me by a most trustworthy observer, the late Hamburgh Physician Dr. Schulz, from whom the Aulic Counsellor Meiners, of Goettingen, also received it, and inserted it in his

well-known collection. It was that of a girl between twelve and thirteen years of age, belonging to a family of some distinction, who was afflicted with a violent nervous complaint, in which strong convulsive motions alternated with catalepsy and syncope. Besides, she frequently had paroxysms, during which she conversed with much liveliness and ingenuity. *In this state, she distinguished without difficulty all colours that were presented to her, recognised the numbers of the cards, and the stripes upon those which were variegated. She described the binding of books when shown to her. She wrote in the same manner as usual, and cut figures on paper, as she was accustomed to do for pastime in her waking state. Her eyes, at this time, were firmly closed; but in order to be assured that she made no use of them, a bandage was placed over them on the approach of the paroxysm.*

Another very remarkable case will be found in the "Breslau Medical Collections." It relates to a rope-maker, who was frequently overtaken by sleep, even in the daytime, and in the midst of his usual occupations. While in this state, he sometimes recommenced doing all that he had been engaged in during the previous part of the day; at other times he would continue the work in which he happened to be engaged at the commencement of the paroxysm, and finished his business with as great ease and success as when awake. When the fit overtook him in travelling, he proceeded on his journey with the same facility, and almost faster than when awake, without missing the road or stumbling over any thing. In this

manner he repeatedly went from Nuremburg to Weimar. Upon one of these occasions he came into a narrow lane where there lay some timber. He passed over it regularly without injury; and with equal dexterity he avoided the horses and carriages that came in his way. At another time, he was overtaken by sleep just as he was about to set out for Weimar on horseback. He rode through the river Ilme, allowed his horse to drink, and drew up his legs to prevent them getting wet; then passed through several streets, crossed the market-place, which was, at that time, full of people, carts, and booths, and arrived in safety at the house of an acquaintance, where he awoke. These and many similar acts, requiring the use of the eyes, he performed in darkness, as well as by daylight. *His eyes, however, were firmly closed, and he could not see when they were forced open, and stimulated by light brought near them.* His other senses appeared to be equally dormant as were his eyes. He could not smell the most volatile spirit. He felt nothing when pinched, pricked, or struck. He heard nothing when called by his name, or even when a pistol was discharged close beside him.

There is another case, somewhat older, observed and circumstantially reported by a trustworthy physician, Dr. Knoll, which equally deserves our attention. The subject of his observation was a young man, a gardener, who became somnambulous, and while in that state performed many extraordinary operations. He generally fell asleep about eight o'clock in the evening, and then began to utter devotional sentences and

prayers. Afterwards he went out of the house, clambered over a high wooden partition, and a still higher wall, uninjured, passed through several streets, and returned. At another time he climbed up to the roof of the house, and rode astride upon the gutter, as if upon horseback, clambered about for some time upon the roof, and, at length, descended in safety. With a view to prevent accidents, he was locked up in a room, and watched. When he became somnambulous, at the usual time, he began to perform all sorts of operations on his clothes and the furniture of the room. He climbed up to the window sill, and from thence to a stone which was much higher, and at some distance, and rode upon the latter, as if upon a horse. The height of the stone, its distance from the window, and its small breadth, were such, that a person awake would scarcely have ventured to attempt these operations. After descending from the stone, he knocked a large table about hither and thither, and finding it was likely to fall on him, he very dexterously contrived to evade it. He gathered together all the clothes he could find in the room, mixed them together, then separated them carefully, and hung them up, each article in its proper place. The old stockings and shoes he endeavoured to arrange in pairs, according to their shape and colour, as if he actually saw them. He then laid hold of a needle, which he had stuck into the wall some weeks before, and sewed his small-clothes. Besides these, he performed a variety of other operations, *all requiring light and the use of the eyes, with which, it would appear, he was enabled to dispense.*

In addition to the foregoing instances, I must here notice two remarkable cases, which were both observed with great accuracy by individuals who are elevated far above all suspicion of credulity, deceit, and imposture. The one is reported by the Professor, and Aulic Counsellor, Feder. The subject of his observations was a student, who, during a severe nervous complaint, experienced several attacks of Somnambulism. Upon these occasions he would go from his bed-room to his parlour and back, open and shut the doors, as well as his closet, and take out of the latter whatever he wanted—pieces of music, pen, ink, and paper, *and all this with his eyes shut!* From among his music he selected a march from the opera of *Medea*, laid the sheet in a proper situation before him, and having found the appropriate key, he played the whole piece with his usual skill upon the harpsichord. In the same manner he also played one of Bach's sonatas, and gave the most expressive passages with surprising effect. One of the persons present turned the notes upside down: this he immediately perceived, and when he recommenced playing, he replaced the sheet in its proper position. When playing, he remarked a string out of tune, upon which he stopped, put it in order, and again proceeded. He wrote a letter to his brother, and what he wrote was not only perfectly rational, but straight and legible. While Professor Feder was on a visit to him one afternoon, he (the somnambulist) observed that it was snowing, which was actually the case. On the same occasion, *notwithstanding his eyes were still completely closed*, he remarked that the landlord of the opposite house was

standing at the window, which was true, and that hats were hanging at the window of another room, which was also the fact. He opened Professor Feder's *Compendium* of logic and metaphysics, and pointed out to him several passages which he thought interesting, as also some of his own written notes of the Professor's lectures in a volume which had been recently bound. We must observe, however, the remarkable circumstance—common to him, indeed, with several other somnambulists—that there were many things he did not perceive. Thus, while writing to his brother, he did not observe that there was no more ink in the pen, and continued to write on. At one time he struck fire, and held the tinder to his ear, as if to hear the crackling, and then ascertain if it was burning. He lighted a match, came to the candle, and held it in the middle of the flame.

In conclusion, I may refer to the case observed by the Archbishop of Bourdeaux, and reported in the great French Encyclopedia. It is the case of a young ecclesiastic, in the same seminary with the Archbishop, who was in the habit of getting up during the night in a state of Somnambulism, of going to his room, taking pen, ink, and paper, and composing and writing sermons. When he had finished one page of the paper on which he was writing, he would read over what he had written and correct it. Upon one occasion, he had made use of the expression *ce divin enfant.* In reading over the passage, he changed the adjective *divin* into *adorable.* Perceiving, however, that the pronoun *ce* could not stand before the word *adorable,* he added to the former the letter *t.* In

order to ascertain whether the somnambulist made really any use of his eyes, the Archbishop held a piece of pasteboard under his chin, to prevent him from seeing the paper on which he was writing; but he continued to write on without appearing to be incommoded in the slightest degree.

The paper on which he was writing was taken away; but the somnambulist immediately perceived the change. He wrote pieces of music while in this state, and in the same manner *with his eyes closed.* The words were placed under the musical notes. It happened, upon one occasion, that the words were written in too large a character, and did not stand precisely under the corresponding notes. He soon perceived the error, blotted out the part, and wrote it over again with great exactness.

I hope that these examples, to which I might add a great many others, will be sufficient to show that the somnambulist, during this extraordinary state, is enabled, apparently without the use of his eyes, to receive impressions equally well, or, at least, with the same consequences to his perceptive faculty, as when awake.

Mr. Colquhoun, the translator of Wienholt, supplies us from his extensive reading, with a number of the best authenticated cases descriptive of the same condition of things in Somnambulism, and derangement of the nervous system induced by Mesmerism; and as this is the only physical symptom of any consequence, described by European Mesmerists, which I have not yet seen in India, I hope that Mr. Colquhoun will

excuse my making such free use of his facts, in order to complete this subject.

The reporters of the facts in question are, for the most part, men whose intellectual attainments, in general, are known to have been of a superior order, and whose moral character is elevated far above suspicion; men, in short, far more honourable and trustworthy than their wretched, chiefly anonymous, calumniators. They will be found to be, principally, eminent physicians, such as Hufeland, physician to the king of Prussia; Steiglitz, physician to the king of Hanover; Brandis, physician to the king of Denmark; Klein, physician to the king of Wirtemberg; Wienholt; Olbers, the astronomer; Gmelin; Heinecken; Böckman; Baehrens; Ennemmoser; Sprengel, author of a history of medicine, and other learned works; Haindorf; Nolte; Spindler; Nasse; Nees von Esenbeck; Passavant; Ziermann; Heinroth; Leupoldt &c. — Physiologists, such as Reil; Treviranus; Autenrieth; Humboldt; Burdach; Eschenmayer; Kieser, &c. — Naturalists, such as La Place, Cuvier, Oken, &c. — Philosophers, such as Fichte, Schelling, Steffens, Baader, Hegel, &c. — Theologians, such as Schleiermacher, Mayer, &c. To these might be added a vast number of men of general science, and celebrated literary characters. The French magnetists — Puysegur, Deleuze, Bertrand, Georget, Cuvier, Despine, Rostan, Husson, Filassier, Foissac, Gauthier, Teste, &c. — constitute a perfect host.

But it has been alleged that the evidence of these enlightened individuals is liable to discredit, because, forsooth, they were engaged in investigating the

phenomena of animal magnetism. Assuredly, this is a strange, and we must take the liberty of saying, a most preposterous objection. Pray, how are the facts of nature to be discovered and appreciated, unless by those who take an interest in investigating them? Are the facts of chemistry to be discredited, because they have been discovered by chemists? And is the same *ultra* sceptical test to be applied to electricity, galvanism, astronomy, and general physics? Are no facts to be relied upon as genuine, but such as may happen to be adduced by ignorant and unskilful persons, who have neither the requisite talent, nor the disposition for investigation, and who are, moreover, careless and indifferent to the results?

The Author, then, feels no hesitation in appealing to the experience of the most eminent magnetists, in confirmation of the fact which, as we have seen, has been manifested in many instances, of the natural Somnambulism; but in order to deprive the most obdurate sceptics of every pretence for denying the reality of the fact in question, we shall proceed to the brief enumeration of cases, in which the controverted phenomenon was distinctly and unequivocally manifested.

Dr. Tritschler's somnambulist—a boy of thirteen years of age—saw and recognised the numbers and pictures on cards, when introduced under the bed-cover, and placed upon his stomach, in complete darkness, and covered, moreover, by the hand of the magnetiser. The same recognition took place in the case of written notes.

Madame Millet, magnetised by Van Ghert, saw her

physician's hand and finger by means of the *epigastrium.* At a later period she recognised, in a similar manner, some portraits. At last she became so *clairvoyante* as to be able to read, by means of the *epigastrium,* at the distance of a foot and a half.

Miss St., under the care of Dr. Lehmann, accurately distinguished the colours of cards by means of the epigastrium. Kieser's epileptic boy read fluently by means of the pit of the stomach. Maria Rübel, in Langenberg, read sealed letters by means of the epigastrium; nay, even written characters enveloped in a covering of double linen. De Valenti's patient described the ornamental devices on his watch; she also recognised the picture of a soldier placed on her stomach. In many other patients the functions of other organs were also manifested at the *epigastrium.* Dr. Joseph Frank's patient, Louisa Baerkmann, recognised and felt the taste of sugared water at the epigastric region, and *heard* at the same place. A servant girl, magnetised by De Valenti, also heard at the *epigastrium.* Dr. Klein's patient said, "This is very comical—I hear by means of my stomach;" and she laughed aloud at the singularity of the phenomenon. Her ears having been stopt, she said, "That is of no use; I hear with this," pointing to her stomach.

In the case of other somnambulists, the common sense seemed to be transferred to the points of the fingers, as in the case of Miss M'Evoy, of Liverpool. Professor Kieser's patient, Anthony Arst, read with his forefinger, and distinguished cards in the same manner. Nay, when he held his elbow out of the window, he saw every thing in the street to the dis-

tance of 150 paces. Van Ghert's somnambulist saw by the means of the fingers; as also Mądame Millet and Maria Rübel, formerly noticed, and Dr. Durr's patient. An idio-somnambulic boy at Halmstadt, in Holland, read fluently by means of his breast and fingers. Dr. Meyer's patient, at Dulken in Rhenish Prussia, heard with the points of his fingers. One of Dr. Kerner's somnambulists heard sometimes with her fingers, sometimes with every part of her body. Articles of food she tasted with her fingers, as with her mouth. The second somnambulist, mentioned in the work referred to, saw only when she placed her finger on the pit of the stomach, or on the crown of the head. She sometimes heard, smelt, and saw with the point of the middle finger.

Other cases are recorded in which the patients saw and heard with the nose, the chin, the elbows, the knees, the toes, and all the prominent parts of the body. Augusta Miller of Carlsruhe saw with her forehead, her eyelids, and her eye-brows. Dr. Werner mentions, as a singular peculiarity, that his somnambulist possessed the power of changing the *focus* of vision at pleasure. In some cases, it would appear, the whole body becomes as it were *clairvoyant.* This was the case with Dr. Heinecken's patient at Bremen, who saw without the assistance of the eyes, or of any other special organ; and she expressly declared that such somnambulists were much more *clairvoyant* than those whose perceptive faculties were localised. Hence the somnambulists are frequently unable to give any adequate description of these *metastases* of the perceptive faculties, and the

species of perception, in these cases, might, perhaps, be more properly denominated feeling, than actual *sight*, *hearing*, &c. It is worthy of remark, too, that the perceptions of these somnambulists, in general, are much more vivid, acute, and delicate, than in the waking state.

The foregoing observations, it is presumed, must be sufficient to convince every candid and unprejudiced mind of the existence in certain states of the organism, of the phenomenon of sensible perception, without the use of the appropriate organs.

Here, then, we have a body of evidence in support of the existence of natural and artificial "clairvoyance," given by the same description of persons; physicians of eminence and unimpeached honour, a body of men who, perhaps more than the members of any other profession, are dependent on their character as the means of winning daily bread. It appears to me, that there is no ground for preferring the evidence of one set of witnesses to the other, and that both are by their character and knowledge eminently entitled to our belief, unless we reject all human testimony, declare clairvoyance to be a subject on which it is useless to accumulate facts and evidence, and "taboo" its consideration by the human mind.

THE END.

THE

PHILOSOPHY

OF

SLEEP.

BY

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PREFACE TO THE SECOND EDITION.

The present Edition of The Philosophy of Sleep is so different from its predecessor, that it may almost be regarded as a new treatise. The work has been, in a great measure, re-written, the arrangement altered, and a great accession made to the number of facts and cases: the latter, many of which are now published for the first time, will, I hope, add much to its value. Some of them have occurred in my own practice; and for others, I am indebted to the kindness of several ingenious friends. Notwithstanding every care, the work is far from being what it ought to be, and what I could have wished; but, imperfect as it is, it may, perhaps, stimulate some other inquirer to investigate the subject more deeply, and thus give rise to an abler disquisition. So far as I know, this is the only treatise in which an attempt is made to give a complete account of Sleep. The subject is not

an easy one; and, in the present state of our knowledge, moderate success is probably all that can be looked for.

In the first Edition, Dr. Gall's theory, that the brain is composed of a plurality of organs, each organ being the seat of a particular mental faculty, was had recourse to for the purpose of explaining the different phenomena of Sleep; in the present Edition, this doctrine is more prominently brought forward. The great objection to the prevailing metaphysical systems is, that none of their positions can be proved; and that scarcely two writers agree upon any particular point. The disciples of Gall, on the other hand, assume that his system, having ascertainable facts to illustrate it, is at all times susceptible of demonstration—that nothing is taken for granted; and that the inquirer has only to make an appeal to nature to ascertain its fallacy or its truth. The science is entirely one of observation: by that it must stand or fall, and by that alone ought it to be tested. The phrenological system appears to me the only one capable of affording a rational and easy explanation of all the phenomena of mind. It is impossible to account for dreaming, idiocy, spec-

tral illusions, monomania, and partial genius in any other way. For these reasons, and for the much stronger one, that having studied the science for several years with a mind rather hostile than otherwise to its doctrines, and found that nature invariably vindicated their truth, I could come to no other conclusion than that of adopting them as a matter of belief, and employing them for the explanation of phenomena which they alone seem calculated to elucidate satisfactorily. The system of Gall is gaining ground rapidly among scientific men, both in Europe and America. Some of the ablest physiologists in both quarters of the globe have admitted its accordance with nature; and, at this moment, it boasts a greater number of proselytes than at any previous period of its career. The prejudices still existing against it, result from ignorance of its real character. As people get better acquainted with the science, and the formidable evidence by which it is supported, they will think differently.

Many persons who deny the possibility of estimating individual character, with any thing like accuracy, by the shape of the head, admit the great phrenological principle that the brain is

composed of a plurality of organs. To them, as well as to those who go a step farther, the doctrine laid down in the present work will appear satisfactory. An admission that the brain is the material apparatus by which the mind manifests itself, and that each mental faculty is displayed through the medium of a particular part of the brain, is all that is demanded in considering the philosophy of the science. These points are only to be ascertained by an appeal to nature. No man can wisely reject phrenology without making such an appeal.

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THE

PHILOSOPHY OF SLEEP.

CHAPTER I.

INTRODUCTION.

Sleep is the intermediate state between wakefulness and death : wakefulness being regarded as the active state of all the animal and intellectual functions, and death as that of their total suspension.

Sleep exists in two states ; in the complete and incomplete. The former is characterized by a torpor of the various organs which compose the brain, and by that of the external senses and voluntary motion. Incomplete sleep, or dreaming, is the active state of one or more of the cerebral organs while the remainder are in repose : the senses and the volition being either suspended or in action according to the circumstances of the case. Complete sleep is a temporary metaphysical death, though not an organic one—the heart and lungs performing their offices with their accustomed regularity under the control of the involuntary muscles.

Sleep is variously modified, as we shall fully explain hereafter, by health and disease. The sleep of health is full of tranquillity. In such a state we remain for hours at a time in unbroken repose, nature banqueting on its sweets, renewing its lost energies, and laying in a fresh store for the succeeding day. This accomplished, slumber vanishes like a vapor before the rising sun; languor has been succeeded by strength; and all the faculties, mental and corporeal, are recruited. In this delightful state, man assimilates most with that in which Adam sprang from his Creator's hands, fresh, buoyant, and vigorous; rejoicing as a racer to run his course, with all his appetencies of enjoyment on edge, and all his feelings and faculties prepared for exertion.

Reverse the picture, and we have the sleep of disease. It is short, feverish, and unrefreshing, disturbed by frightful or melancholy dreams. The pulse is agitated, and, from nervous excitation, there are frequent startings and twitchings of the muscles. Nightmare presses like an incarnation of misery upon the frame—imagination, distempered by its connexion with physical disorder, ranging along the gloomy confines of terror, holding communication with hell and the grave, and throwing a discoloring shade over human life.

Night is the time for sleep; and assuredly the hush of darkness as naturally courts to repose as meridian splendor flashes on us the necessity of our being up at our labor. In fact, there exists

a strange, but certain sympathy between the periods of day and night, and the performance of particular functions during these periods. That this is not the mere effect of custom, might be readily demonstrated. All nature awakes with the rising sun. The birds begin to sing; the bees to fly about with murmurous delight. The flowers which shut under the embrace of darkness, unfold themselves to the light. The cattle arise to crop the dewy herbage; and "man goeth forth to his labor until the evening." At close of day, the reverse of all this activity and motion is observed. The songs of the woodland choir, one after another, become hushed, till at length twilight is left to silence, with her own star and her falling dews. Action is succeeded by listlessness, energy by languor, the desire of exertion by the inclination for repose. Sleep, which shuns the light, embraces darkness, and they lie down together under the sceptre of midnight.

From the position of man in society, toil or employment of some kind or other is an almost necessary concomitant of his nature—being essential to healthy sleep, and consequently to the renovation of our bodily organs and mental faculties. But as no general rule can be laid down as to the quality and quantity of labor best adapted to particular temperaments, so neither can it be positively said how many hours of sleep are necessary for the animal frame. When the body is in a state of increase, as in the advance from infancy to boyhood, so much sleep is required, that the greater

portion of existence may be fairly stated to be absorbed in this way. It is not mere repose from action that is capable of recruiting the wasted powers, or restoring the nervous energy. Along with this is required that oblivion of feeling and imagination which is essential to, and which in a great measure constitutes, sleep. But if in mature years the body is adding to its bulk by the accumulation of adipose matter, a greater tendency to somnolency occurs than when the powers of the absorbents and exhalents are so balanced as to prevent such accession of bulk. It is during the complete equipoise of these animal functions that health is enjoyed in greatest perfection; for such a state presupposes exercise, temperance, and a tone of the stomach quite equal to the process of digestion.

Sleep and stupor have been frequently treated of by physiological writers as if the two states were synonymous. This is not the case. In both there is insensibility; but it is easy to awake the person from sleep, and difficult, if not impossible, to arouse him from stupor. The former is a necessary law of the animal economy; the latter is the result of diseased action.

Birth and death are the Alpha and Omega of existence; and life, to use the language of Shakspeare, "is rounded by a sleep."

When we contemplate the human frame in a state of vigor, an impression is made on the mind that it is culculated to last forever. One set of

organs is laying down particles and another taking them up, with such exquisite nicety, that for the continual momentary waste there is continual momentary repair; and this is capable of going on with the strictest equality for half a century.

What is life? Those bodies are called living in which an appropriation of foreign matter is going on; death is where this process is at an end. When we find blood in motion, the process of appropriation is going on. The circulation is the surest sign of life. Muscles retain irritability for an hour or two after circulation ceases, but irritability is not life. Death is owing to the absence of this process of appropriation.

Bichat has divided life into two varieties, the *organic* and the *animal.* The first is common to both vegetables and animals, the last is peculiar to animals alone. Organic life applies to the functions which nourish and sustain the object—animal life to those which make it a sentient being; which give it thought, feeling, and motion, and bring it into communication with the surrounding world. The processes of assimilation and excretion exist both in animals and vegetables: the other vital processes are restricted solely to animals. The digestive organs, the kidneys, the heart, and the lungs, are the apparatus which carry into effect the organic life of animals. Those which manifest animal life are the brain, the organs of the senses, and the voluntary powers. Sleep is the suspension of animal life; and during its con-

tinuance the creature is under the influence of organic life alone.

Notwithstanding the renovating influence of sleep, which apparently brings up the lost vigor of the frame to a particular standard, there is a power in animal life which leads it almost imperceptibly on from infancy to second childhood, or that of old age. This power, sleep, however **healthy**, is incapable of counteracting. The skin wrinkles, and everywhere shows marks of the ploughshare of Saturn; the adipose structure dissolves; the bones become brittle; the teeth decay or drop out; the eye loses its exquisite sensibility to sight; the ear to sound; and the hair is bleached to whiteness. These are accompanied with a general decay of the intellectual faculties; there is a loss of memory, and less sensibility to emotion; the iris hues of fancy subside to twilight; and the sphere of thought and action is narrowed. The principle of decay is implanted in our nature, and cannot be counteracted. Few people, however, die of mere decay, for death is generally accelerated by disease. From sleep we awake to exertion —from death not at all, at least on this side of time. Methuselah in ancient, and Thomas Parr in modern times, ate well, digested well, and slept well; but at length they each died. Death is omnivorous. The worm which crawls on the highway and the monarch on his couch of state, are alike subjected to the same stern and inexorable law; they alike become the victims of the universal tyrant.

CHAPTER II.

SLEEP IN GENERAL.

Every animal passes some portion of its time in sleep. This is a rule to which there is no exception; although the kind of slumber and the degree of profoundness in which it exists in the different classes are extremely various. Some physiologists lay it down as a general rule, that the larger the brain of an animal the greater is the necessity for a considerable proportion of sleep. This, however, I suspect is not borne out by facts. Man, for instance, and some birds, such as the sparrow, have the largest brains in proportion to their size, and yet it is probable that they do not sleep so much as some other animals with much smaller brains. The serpent tribe, unless when stimulated by hunger, (in which case they will remain awake for days at a time waiting for their prey,) sleep much more than men or birds, and yet their brains are proportionally greatly inferior in size: the boa, after dining on a stag or goat, will continue in profound sleep for several days. Fishes,*

* As a proof that fishes sleep, Aristotle, who seems to have paid more attention to their habits than any modern author, states,

indeed, whose brains are small, require little sleep; but the same remark applies to birds,* which have large brains, and whose slumber is neither profound nor of long continuance. The assertion, therefore, that the quantum of sleep has any reference to the size of the brain may be safely looked upon as unfounded. That it has reference to the quality of the brain is more likely, for we find that carnivorous animals sleep more than such as are herbivorous; and it is probable that the texture, as well as form, of the brains of these two classes is materially different. This remark, with regard to the causes of the various proportions of sleep required by the carnivorous and herbivorous tribes, I throw out not as a matter of certainty, but merely as a surmise which seems to have considerable foundation in truth.

In proportion as man exceeds all other animals in the excellency of his physical organization, and in intellectual capability, we shall find that in him

that while in this condition they remain motionless, with the exception of a gentle movement of the tail — that they may then be readily taken by the hand, and that, if suddenly touched, they instantly start. The tunny, he adds, are surprised and surrounded by nets while asleep, which is known by their showing the white of their eyes.

* The sleep of some birds is amazingly light. Such is the case with the goose, which is disturbed by the slightest noise, and more useful than any watch-dog for giving warning of danger. It was the cackling of the sacred geese that saved the capitol of Rome from the soldiers of Brennus, when the watch-dogs failed to discover the approach of an enemy.

the various phenomena of sleep are exhibited in greater regularity and perfection. Sleep seems more indispensably requisite to man than to any other creature, if there can be supposed to exist any difference where its indispensability is universal, and where every animal must, in some degree or other, partake of it; but, as regards man, it is certain that he sustains any violation of the law ordaining regular periods of repose with less indifference than the lower grades of creation—that a certain proportion of sleep is more essential to his existence than theirs—that he has less power of enduring protracted wakefulness, or continuing in protracted sleep—and that he is more refreshed by repose and more exhausted by the want of it than they. The sleep of man, therefore, becomes a subject of deeper interest and curiosity than that of any other animal, both on account of the more diversified manner in which it displays itself, and the superior opportunity which exists of ascertaining the various phenomena, which in the inferior animals can only be conjectured or darkly guessed at.

Sleep, being a natural process, takes place in general without any very apparent cause. It becomes, as it were, a habit, into which we insensibly fall at stated periods, as we fall into other natural or acquired habits. But it differs from the latter in this, that it cannot in any case be entirely dispensed with, although by custom we may bring ourselves to do with a much smaller portion than

we are usually in the practice of indulging in. In this respect it bears a strong analogy to the appetite for food or drink. It has a natural tendency to recur every twenty-four hours, and the periods of its accession coincide with the return of night.

But though sleep becomes a habit into which we would naturally drop without any obvious, or very easily discovered cause, still we can often trace the origin of our slumbers; and we are all acquaintedwith many circumstances which either produce or heighten them. I shall mention a few of these causes.

Heat has a strong tendency to produce sleep. We often witness this in the summer season; sometimes in the open air, but more frequently at home, and above all in a crowded meeting. In the latter case the soporific tendency is greatly increased by the impurity of the air. A vitiated atmosphere is strongly narcotic, and when combined with heat and monotony, is apt to induce slumber, not less remarkable for the rapidity of its accession than its overpowering character. In such a situation, the mind in a few minutes ceases to act, and sinks into a state of overpowering oblivion. The slumber, however, not being a natural one, and seldom occurring at the usual period, is generally short: it rarely exceeds an hour; and when the person awakes from it, so far from being refreshed, he is unusually dull, thirsty, and feverish, and finds more than common difficulty in geting his mental powers into their usual state of activity.

A heated church and a dull sermon are almost sure to provoke sleep. There are few men whose powers are equal to the task of opposing the joint operation of two such potent influences. They act on the spirit like narcotics, and the person seems as if involved in a cloud of aconite or belladonna. The heat of the church might be resisted, but the sermon is irresistible. Its monotony falls in leaden accents upon the ear, and soon subdues the most powerful attention. Variety, whether of sight or sound, prevents sleep, while monotony of all kinds is apt to induce it. The murmuring of a river, the sound of the Eolian harp, the echo of a distant cascade, the ticking of a clock, the hum of bees under a burning sun, and the pealing of a remote bell, all exercise the same influence. So conscious was Boerhaave of the power of monotony, that in order to procure sleep for a patient, he directed water to be placed in such a situation as to drop continually on a brass pan. When there is no excitement, sleep is sure to follow. We are all kept awake by some mental or bodily stimulus, and when that is removed our wakefulness is at an end. Want of stimulus, especially in a heated atmosphere, produces powerful effects; but where sufficient stimulus exists, we overcome the effects of the heat, and keep awake in spite of it. Thus, in a crowded church, where a dull, inanimate preacher would throw the congregation into a deep slumber, such a man as Massilon, or Chalmers, would keep them in a state of keen excitement.

He would arrest their attention, and counteract whatever tendency to sleep would otherwise have existed. In like manner, a prosing, monotonous, long-winded acquaintance is apt to make us doze, while another of a lively, energetic conversation keeps us brisk and awake. It will generally be found that the reasoning faculties are those which are soonest prostrated by slumber, and the imaginative the least so. A person would more readily fall asleep if listening to a profound piece of argumentation, than to a humorous or fanciful story; and probably more have slumbered over the pages of Bacon and Locke, than over those of Shakspeare and Milton.

Cold produces sleep as well as heat, but to do so a very low temperature is necessary, particularly with regard to the human race; for, when cold is not excessive, it prevents, instead of occasioning slumber: in illustration of which, I may mention the case of several unfortunate women, who lived thirty-four days in a small room overwhelmed with the snow, and who scarcely slept during the whole of that period. In very northern and southern latitudes, persons often lose their lives by lying down in a state of drowsiness, occasioned by intense cold. The winter sleep, or hybernation of animals, arises from cold; but as this species of slumber is of a very peculiar description; I have discussed it separately in another part of the work.

The finished gratification of all ardent desires has the effect of inducing slumber; hence, after

any keen excitement, the mind becomes exhausted, and speedily relapses into this state. Attention to a single sensation has the same effect. This has been exemplified in the case of all kinds of monotony, where there is a want of variety to stimulate the ideas, and keep them on the alert. "If the mind," says Cullen, "is attached to a single sensation, it is brought very nearly to the state of the total absence of impression;" or, in other words, to the state most closely bordering upon sleep. Remove those stimuli which keep it employed, and sleep ensues at any time.

Any thing which mechanically determines the blood to the brain, acts in a similar manner, such as whirling round for a great length of time, ascending a lofty mountain, or swinging to and fro. The first and last of these actions give rise to much giddiness, followed by intense slumber, and at last by death, if they be continued very long. By lying flat upon a millstone while performing its evolutions, sleep is soon produced, and death, without pain, would be the result, if the experiment were greatly protracted. Apoplexy, which consists of a turgid state of the cerebral vessels, produces perhaps the most complete sleep that is known, in so far that, while it continues, it is utterly impossible to waken the individual: no stimulus, however powerful, has any influence in arousing his dormant faculties. When the circulating mass in the brain is diminished beyond a certain extent, it has the same effect on the oppo-

site state; whence excessive loss of blood excites sleep.

Opium, hyoscyamus, aconite, belladonna, and the whole tribe of narcotics, induce sleep, partly by a specific power which they exert on the nerves of the stomach, and partly by inducing an apoplectic state of the brain. The former effect is occasioned by a moderate—the latter by an over dose.

A heavy meal, especially if the stomach is at the same time weak, is apt to induce sleep. In ordinary circumstances, the nervous energy or sensorial power of this viscus is sufficient to carry on its functions; but when an excess of food is thrown upon it, it is then unable to furnish, from its own resources, the powers requisite for digestion. In such a case it draws upon the whole body—upon the chest, the limbs, &c., from whence it is supplied with the sensorial power of which it is deficient; and is thus enabled to perform that which by its own unassisted means it never could have accomplished. But mark the consequences of such accommodation! Those parts, by communicating vigor to the stomach, become themselves debilitated in a corresponding ratio, and get into a state analogous to that from which they had extricated this viscus. The extremities become cold, the respiration heavy and stertorous, and the brain torpid. In consequence of the torpor of the brain, sleep ensues. It had parted with that portion of sensorial energy which kept it awake, and by supplying another organ is itself thrown into the state

of sleep. It is a curious fact, that the feeling of sleep is most strong while the food remains on the stomach, shortly after the accession of the digestive process, and before that operation which converts the nourishment into chyle has taken place.

When, therefore, the sensorial power is sufficiently exhausted, we naturally fall asleep. As this exhaustion, however, is a gradual process, so is that of slumber. Previous to its accession, a feeling of universal lassitude prevails, and exhibits itself in yawning,* peevishness, heaviness, and weakness of the eyes; indifference to surrounding objects, and all the characteristics of fatigue. If the person be seated, his head nods and droops: the muscles become relaxed; and, when circumstances admit of it, the limbs are thrown into the recumbent position, or that most favorable for complete inaction. The senses then become unconscious of impressions, and, one after the other, part with sensation; the sight first, then taste, smell, hearing, and touch, all in regular order. The

* We yawn before falling asleep and when we wake; yawning, therefore, precedes and follows sleep. It seems an effort of nature to restore the just equilibrium between the flexor and extensor muscles. The former have a natural predominancy in the system; and on their being fatigued, we, by an effort of the will, or rather by a species of instinct, put the latter into action for the purpose of redressing the balance, and poising the respective muscular powers. We do the same thing on awaking, or even on getting up from a recumbent posture — the flexors in such circumstances having prevailed over the extensors, which were in a great measure inert.

brain does not all at once glide into repose: its different organs being successively thrown into this state; one dropping asleep, then another, then a third, till the whole are locked up in the fetters of slumber. This gradual process of intellectual obliteration is a sort of confused dream—a mild delirium which always precedes sleep. The ideas have no resting-place, but float about in the confused tabernacle of the mind, giving rise to images of the most perplexing description. In this state they continue for some time, until, as sleep becomes more profound, the brain is left to thorough repose, and they disappear altogether.

Sleep produces other important changes in the system. The rapidity of the circulation is diminished, and, as a natural consequence, that of respiration: the force of neither function, however, is impaired; but, on the contrary, rather increased. Vascular action is diminished in the brain and organs of volition, while digestion and absorption all proceed with increased energy. The truth of most of these propositions it is not difficult to establish.

The diminished quickness of the circulation is shown in the pulse, which is slower and fuller than in the waking state; that of respiration in the more deliberate breathing which accompanies sleep. Diminished action of the brain is evident from the abolition of its functions, as well as direct evidence. A case is related by Blumenbach, of a person who had been trepanned, and whose brain was observ-

ed to sink when he was asleep, and swell out when he was awake. As for the lessened vascular action in the voluntary powers, this is rendered obvious by the lower temperature on the surface which takes place during the slumbering state. Moreover, in low typhus, cynanche maligna, and other affections attended with a putrid diathesis, the petechiæ usually appear during sleep when the general circulation is least vigorous, while the paroxysms of reaction or delirium take place, for the most part, in the morning when it is in greater strength and activity.

In some individuals the stronger and more laborious respiration of sleep is made manifest by that stertorous sound commonly denominated snoring. Stout apoplectic people—those who snuff much or sleep with their mouths open, are most given to this habit. It seems to arise principally from the force with which the air is drawn into the lungs in sleep. The respiratory muscles being less easily excited during this state do not act so readily, and the air is consequently admitted into the chest with some degree of effort. This, combined with the relaxed state of the fauces, gives rise to the stertorous noise. Snuffing, by obstructing the nasal passages and thus rendering breathing more difficult, has the same effect; consequently snuffers are very often great snorers. The less rapidly the blood is propelled through the lungs, the slower is the respiration, and the louder the stertor becomes. Apoplexy, by impairing the

sensibility of the respiratory organs, and thus reducing the frequency of breathing, produces snoring to a great extent; and all cerebral congestions have, to a greater or lesser degree, the same effect.

That sleep increases absorption is shown in the disappearance or diminution of many swellings, especially œdema of the extremities, which often disappears in the night and recurs in the daytime, even when the patient keeps his bed, a proof that its disappearance does not always depend on the position of the body: that it increases digestion, and, as a natural consequence, nutrition, is rendered probable by many circumstances: hence it is the period in which the regeneration of the body chiefly takes place. Were there even no augmentation given to the assimilative function, as is maintained by Broussais and some other physiologists, it is clear that the body would be more thoroughly nourished than when awake, for all those actions which exhaust it in the latter condition are quiescent, and it remains in a state of rest, silently accumulating power, without expending any.

Sleep lessens all the secretions, with one exception—that of the skin. The urinary, salivary, and bronchial discharges, the secretions from the nose, eyes, and ears, are all formed less copiously than in the waking state. The same rule holds with regard to other secretions—hence diarrhœa, menorrhagia, &c., are checked during the intervals of slumber.

From the diminished vascular action going on

upon the surface, we would be apt to expect a decrease of perspiration, but the reverse is the case. Sleep relaxes the cutaneous vessels, and they secrete more copiously than in the waking state. According to Sanctorius, a person sleeping some hours undisturbed, will perspire insensibly twice as much as one awake. This tendency of sleep to produce perspiration is strikingly exhibited in diseases of debility; whence the nocturnal sweats so prevailing and so destructive in all cachectic affections. Sanctorius farther states, that the insensible perspiration is not only more abundant, but less acrimonious during sleep than in the waking state; that, if diminished during the day, the succeeding sleep is disturbed and broken, and that the diminution in consequence of too short a sleep, disposes to fever, unless the equilibrium is established, on the following day, by a more copious perspiration.

Sleep produces peculiar effects upon the organs of vision. *A priori*, we might expect that, during this state, the pupil would be largely dilated in consequence of the light being shut out. On opening the eyelids cautiously it is seen to be contracted; it then quivers with an irregular motion, as if disposed to dilate, but at length ceases to move, and remains in a contracted state till the person awakes. This fact I have often verified by inspecting the eyes of children. Sleep also communicates to these organs a great accession of sensibility, so much so, that they are extremely

dazzled by a clear light. This, it is true, happens on coming out of a dark into a light room, or opening our eyes upon the sunshine even when we are awake, but the effect is much stronger when we have previously been in deep slumber.

Sleep may be natural or diseased—the former arising from such causes as exhaust the sensorial power, such as fatigue, pain, or protracted anxiety of mind; the latter from cerebral congestion, such as apoplexy or plethora. The great distinction between these varieties is, that the one can be broken by moderate stimuli, while the other requires either excessive stimuli, or the removal of the particular cause which gave rise to it.

During complete sleep no sensation whatever is experienced by the individual: he neither feels pain, hunger, thirst, nor the ordinary desires of nature. He may be awakened to a sense of such feelings, but during perfect repose he has no consciousness whatever of their existence—if they can indeed be said to exist where they are not felt. For the same reason, we may touch him without his feeling it; neither is he sensible to sounds, to light, or to odors. When, however, the slumber is not very profound, he may hear music or conversation, and have a sense of pain, hunger, and thirst; and, although not awakened by such circumstances, may recollect them afterwards. These impressions, caught by the senses, often give rise to the most extraordinary mental combinations, and form the groundwork of the most elaborate dreams.

I am of opinion that we rarely pass the whole of any one night in a state of perfect slumber. My reason for this supposition is, that we very seldom remain during the whole of that period in the position in which we fall asleep. This change of posture must have been occasioned by some emotion, however obscure, affecting the mind, and through it the organs of volition, whereas in complete sleep we experience no emotion whatever.

The position usually assumed in sleep has been mentioned; but sleep may ensue in any posture of the body; persons fall asleep on horseback, and continue riding in this state for a long time without being awakened. Horses sometimes sleep for hours in the standing posture; and the circumstance of somnambulism shows that the same thing may occur in the human race.

Some animals, such as the hare, sleep with their eyes open; and I have known similar instances in the human subject. But the organ is dead to the ordinary stimulus of light, and sees no more than if completely shut.

Animals which prey by night, such as the cat, hyena, &c., pass the greater part of their time in sleep; while those that do not, continue longer awake than asleep. The latter slumber part of the night and continue awake so long as the sun continues above the horizon. The propensity of the former to sleep in the daytime seems to proceed from the structure of their eyes; as they see much better in darkness than in light, and conse-

quently pass in slumber that period in which their vision is of least avail to them. It is a very curious fact, however, that these animals, when kept in captivity, reverse the order of their nature, and remain awake by day while they sleep by night. This fact has been ascertained in the menagerie at Paris. In such cases I apprehend that some corresponding change must take place in the structure of the eyes, assimilating them to those of animals which naturally sleep by night.

M. Castel observes,* that the greater part of animals sleep longer in winter than in summer. It is precisely on account of perspiration that in the first of these seasons sleep is more necessary than in the second. In winter, the want of perspiration during day is furnished in sleep; in summer, the diurnal sweat supplies that of the night, and renders much sleep less necessary. In other words, during summer the perspiration is so much excited by atmospheric temperature, that a shorter time is sufficient to give issue to the fluids which have to be expelled by this means. For the same reason, the inhabitants of very cold climates sleep more than those who live in the warmer latitudes.

The profoundness of sleep differs greatly in different individuals. The repose of some is extremely deep; that of others quite the reverse. One will scarcely obey the roar of a cannon; another will start at the chirping of a cricket or the faintest dazzling of the moonbeams. Heavy-

* "Journal Complémentaire."

minded, phlegmatic people generally belong to the former class; the irritable, the nervous, and the hypochondriac to the latter, although we shall at times find the cases reversed with regard to the nature of sleep enjoyed by these different temperaments. Man is almost the only animal in whom much variety is to be found in this respect. The lower grades are distinguished by a certain character, so far as their slumber is concerned, and this character runs through the whole race: thus, all hares, cats, &c., are light sleepers; all bears, turtles, badgers, &c., are the reverse. In man, the varieties are infinite. Much of this depends upon the age and temperament of the individual, and much upon custom.

The profoundness of sleep differs also during the same night. For the first four or five hours, the slumber is much heavier than towards morning. The cause of such difference is obvious; for we go to bed exhausted by previous fatigue, and consequently enjoy sound repose, but, in the course of a few hours, the necessity for this gradually abates, and the slumber naturally becomes lighter.

That sleep from which we are easily roused is the healthiest: very profound slumber partakes of the nature of apoplexy.

On being suddenly awakened from a profound sleep our ideas are exceedingly confused; and it is sometime before we can be made to comprehend what is said to us. For some moments, we neither

see, nor hear, nor think with our usual distinctness, and are, in fact, in a state of temporary reverie.

When there is a necessity for our getting up at a certain hour, the anxiety of mind thus produced not only prevents the sleep from being very profound, but retards its accession; and even after it does take place, we very seldom oversleep ourselves, and are almost sure to be awake at, or before, the stipulated time.

Shortly after falling asleep, we often awake with a sudden start, having the mind filled with painful impressions; although we often find it impossible to say to what subject they refer. Some persons do this regularly every night, and there can be no doubt that it proceeds from the mind being tortured by some distressing vision; which, however, has faded away without leaving behind it any feeling, save one of undefinable melancholy. There are some persons who are sure to be aroused in this startling and painful manner if they happen to fall asleep in the position in which they at first lay down, who nevertheless escape if they turn themselves once or twice before falling into repose. This fact we must take as we find it: any explanation as to its proximate cause seems quite impracticable.

Disease exercises a powerful influence upon sleep. All affections attended with acute pain prevent it, in consequence of the undue accumulation which they occasion of sensorial power. This

is especially the case where there is much *active* determination of blood to the head, as in phrenetic affections, and fevers in general.

Sleep is always much disturbed in hydrothorax; and almost every disease affects it, more or less; some preventing it altogether, some limiting the natural proportion, some inducing fearful dreams, and all acting with a power proportioned to the direct or indirect influence which they exercise upon the sensorium.

From the increased irritability of the frame and relaxed state of the cutaneous vessels during sleep, the system at that time is peculiarly apt to be acted upon by all impressions, especially of cold; and those who fall asleep exposed to a current of air are far more apt to feel the consequences thereof than if they were broad awake. By a law of nature the sensibility of the system is increased by any suspension of the mental or voluntary powers, for the same reason that it is diminished, while these powers resume their action. In drunkenness, for instance, where the mind is vehemently excited, we are far less susceptible of cold than in a state of sobriety.

Sleep is much modified by habit. Thus, an old artillery-man often enjoys tranquil repose, while the cannon are thundering around him; an engineer has been known to fall asleep within a boiler, while his fellows were beating it on the outside with their ponderous hammers; and the repose of a miller is nowise incommoded by the noise of his mill.

Sound ceases to be a stimulus to such men, and what would have proved an inexpressible annoyance to others, is by them altogether unheeded. It is common for carriers to sleep on horseback, and coachmen on their coaches. During the battle of the Nile, some boys were so exhausted, that they fell asleep on the deck amid the deafening thunder of that dreadful engagement. Nay, silence itself may become a stimulus, while sound ceases to be so. Thus, a miller being very ill, his mill was stopped that he might not be disturbed by its noise; but this so far from inducing sleep, prevented it altogether; and it did not take place till the mill was set a-going again. For the same reason, the manager of some vast iron-works, who slept close to them amid the incessant din of hammers, forges, and blast furnaces, would awake if there was any cessation of the noise during the night. To carry the illustration still farther, it has been noticed, that a person who falls asleep near a church, the bell of which is ringing, may hear the sound during the whole of his slumber, and be nevertheless aroused by its sudden cessation. Here the sleep must have been imperfect, otherwise he would have been insensible to the sound: the noise of the bell was no stimulus; it was its cessation which, by breaking the monotony, became so, and caused the sleeper to awake.

The effects of habit may be illustrated in various ways. "If a person, for instance, is accustomed to go to rest exactly at nine o'clock in the evening,

and to rise again at six in the morning, though the time of going to sleep be occasionally protracted till twelve, he will yet awake at his usual hour of six; or, if his sleep be continued by darkness, quietude, or other causes, till the day be farther advanced, the desire of sleep will return in the evening at nine."

Persons who are much in the habit of having their repose broken, seldom sleep either long or profoundly, however much they may be left undisturbed. This is shown in the cases of soldiers and seamen, nurses, mothers, and keepers.

Seamen and soldiers on duty can, from habit, sleep when they will, and wake when they will. The Emperor Napoleon was a striking instance of this fact. Captain Barclay, when performing his extraordinary feat of walking a mile an hour for a thousand successive hours, obtained at last such a mastery over himself, that he fell asleep the instant he lay down. Some persons cannot sleep from home, or on a different bed from their usual one: some cannot sleep on a hard, others on a soft bed. A low pillow prevents sleep in some, a high one in others. The faculty of remaining asleep for a great length of time, is possessed by some individuals. Such was the case with Quin, the celebrated player, who could slumber for twenty-four hours successively—with Elizabeth Orvin, who spent three-fourths of her life in sleep—with Elizabeth Perkins, who slept for a week or a fortnight at a time—with Mary Lyall, who did the same for

six successive weeks—and with many others, more or less remarkable. In Bowyer's life of Beattie, a curious anecdote is related of Dr. Reid, viz., that he could take as much food and immediately afterwards as much sleep as were sufficient for two days.

A phenomenon of an opposite character is also sometimes observed, for there are individuals who can subsist upon a surprisingly small portion of sleep. The celebrated General Elliot was an instance of this kind: he never slept more than four hours out of the twenty-four. In all other respects he was strikingly abstinent; his food consisting wholly of bread, water, and vegetables. In a letter communicated to Sir John Sinclair, by John Gordon, Esq. of Swiney, Caithness, mention is made of a person, named James Mackay, of Skerray, who died in Strathnaver in the year 1797, aged ninety-one: he only slept, on an average, four hours in the twenty-four, and was a remarkably robust and healthy man. Frederick the Great, of Prussia, and the illustrious surgeon, John Hunter, only slept five hours in the same period; and the sleep of the active-minded is always much less than that of the listless and indolent. The celebrated French General Pichegru, informed Sir Gilbert Blane, that during a whole year's campaigns, he had not above one hour's sleep in the twenty-four. I know a lady who never sleeps above half an hour at a time, and the whole period of whose sleep does not exceed three or four hours in the twenty-four; and yet

she is in the enjoyment of excellent health. Gooch gives an instance of a man who slept only for fifteen minutes out of the twenty-four hours, and even this was only a kind of dozing, and not a perfect sleep: notwithstanding which, he enjoyed good health, and reached his seventy-third year. I strongly suspect there must be some mistake in this case, for it is not conceivable that human nature could subsist upon such a limited portion of repose. Instances have been related of persons who *never slept;* but these must be regarded as purely fabulous.

The period of life modifies sleep materially. When a man is about his grand climateric, or a few years beyond it, he slumbers less than at any former period of life; but very young children always sleep away the most of their time. At this early period, the nerves being extremely sensitive and unaccustomed to impressions, become easily fatigued. As the children get older, the brain besides becoming habituated to impressions, acquires an accession of sensorial power, which tends to keep it longer awake. For the first two or three years, children sleep more than once in the twenty-four hours. The state of the fœtus has been denominated, by some writers, a continued sleep, but the propriety of this definition may be doubted; for the mind having never yet manifested itself, and the voluntary organs never having been exercised, can hardly be said to exist in slumber, a condition which supposes a previous waking state of the

functions. Middle-aged persons who lead an active life, seldom sleep above eight or nine hours in the twenty-four, however much longer they may lie in bed; while a rich, lazy, and gormandizing citizen will sleep twelve or thirteen hours at a time.

Sleep is greatly modified in old people. They usually slumber little, and not at all profoundly. Sometimes, however, when they get into a state of dotage, in consequence of extreme old age, the phenomena of childhood once more appear, and they pass the greater part of their time in sleep. The repose of the aged is most apt to take place immediately after taking food, while they often solicit it in vain at that period at which, during the former years of their lives, they had been accustomed to enjoy it. The celebrated de Moivre slept twenty hours out of the twenty-four, and Thomas Parr latterly slept away by far the greater part of his existence.

Those who eat heartily, and have strong digestive powers, usually sleep much. The great portion of sleep required by infants is owing, in part, to the prodigious activity of their digestive powers. The majority of animals sleep after eating, and man has a strong tendency to do the same thing, especially when oppressed with heat. In the summer season, a strong inclination is often felt, to sleep after dinner, when the weather is very warm.

A heavy meal, which produces no uneasy feeling while the person is awake, will often do so if he fall asleep. According to Dr. Darwin, this proceeds from the sensorial actions being increased, when the volition is suspended. The digestion from this circumstance goes on with increased rapidity. "Heat is produced in the system faster than it is expended; and, operating on the sensitive actions, carries them beyond the limitations of pleasure, producing, as is common in such cases, increased frequency of pulse." In this case, incomplete sleep is supposed, for, when the slumber is perfect, no sensation whatever, either painful or the reverse, can be experienced.

In recovering from long protracted illness, accompanied with great want of rest, we generally sleep much — far more, indeed, than during the most perfect health. This seems to be a provision of nature for restoring the vigor which had been lost during disease, and bringing back the body to its former state. So completely does this appear to be the case, that as soon as a thorough restoration to health takes place, the portion of sleep diminishes till it is brought to the standard at which it originally stood before the accession of illness.

After continuing a certain time asleep, we awake, stretch ourselves, open our eyes, rub them, and yawn several times. At the moment of awaking, there is some confusion of ideas, but this immediately wears away. The mental faculties from

being in utter torpor, begin to act one after the other;* the senses do the same. At last, the mind, the senses, and the locomotion being completely restored, what are our sensations? Instead of the listlessness, lassitude, and general fatigue experienced on lying down, we feel vigorous and refreshed. The body is stronger, the thoughts clearer and more composed; we think coolly, clearly, rationally, and can often comprehend with ease what baffled us on the previous night.

One or two other points remain to be noticed. On awaking, the eyes are painfully affected by the light, but this shortly wears away, and we then feel them stronger than when we went to bed. The muscular power, also, for a few seconds, is affected. We totter when we get up; and if we lay hold of any thing, the hand lacks its wonted strength. This, however, as the current of nervous energy is restored throughout the muscles, immediately disappears; and we straightway possess redoubled vigor. On examining the urine, we find that it is higher in its color than when we

* "In the gradual progress from intense sleep, when there can be no dream, to the moment of perfect vigilance, see what occurs. The first cerebral organ that awakes enters into the train of thinking connected with its faculty: some kind of DREAM is the result; as organ after organ awakes, the dream becomes more vivid; and as the number of active organs increases, so does the complication of dreams; and if all the internal organs are awake, the man is still asleep until his awakening senses bring him into direct communication with the world."

Carmichael's Memoir of Spurzheim, p. 92.

lay down. The saliva is more viscid, the phlegm harder and tougher, the eyes glutinous, and the nostrils dry. If we betake ourselves to the scale, we find that our weight has diminished in consequence of the nocturnal perspirations; while, by subjecting our stature to measurement, we shall see that we are taller by nearly an inch than on the preceding night. This fact was correctly ascertained in a great variety of instances by Mr. Wasse, Rector of Aynho in Northumberland; and is sufficiently accounted for by the intervertebral cartilages recovering their elasticity, in consequence of the bodily weight being taken off them during the recumbent posture of sleep.

Such are the leading phenomena of sleep. With regard to the purposes which it serves in the economy, these are too obvious to require much detail. Its main object is to restore the strength expended during wakefulness; to recruit the body by promoting nutrition and giving rest to the muscles; and to renovate the mind by the repose which it affords the brain. Action is necessarily followed by exhaustion; sleep by checking the one restrains the other, and keeps the animal machine in due vigor. Mr. Carmichael supposes sleep to be the period when assimilation goes on in the brain. In this respect, I believe that the brain is not differently situated from the rest of the body. There, as elsewhere, the assimilative process proceeds both in the slumbering and in the waking state; but that it is only at work in the

brain during sleep analogy forbids us to admit. So long as circulation continues, a deposition of matter is going on; and circulation, we all know, is at work in the brain as in other organs, whether we be asleep or awake. According to Richerand, one of the great purposes served by sleep, is to diminish the activity of the circulation, which a state of wakefulness has the invariable effect of increasing. "The exciting causes," he observes, "to which our organs are subject during the day, tend progressively to increase their action. The throbbings of the heart, for instance, are more frequent at night than in the morning; and this action, gradually accelerated, would soon be carried to such a degree of activity as to be inconsistent with life, if its velocity were not moderated at intervals by the recurrence of sleep."

To detail the beneficent purposes served by sleep in the cure of diseases, as well as in health, would be a work of supererogation. They are felt and recognised by mankind as so indispensable to strength, to happiness, and to life itself, that he who dispenses with that portion of repose required by the wants of nature, is in reality curtailing the duration of his own existence.

CHAPTER III.

DREAMING.

In perfect sleep, as we have elsewhere stated, there is a quiescence of all the organs which compose the brain; but when, in consequence of some inward excitement, one organ or more continues awake, while the remainder are in repose, a state of incomplete sleep is the result, and we have the phenomena of dreaming. If, for instance, any irritation, such as pain, fever, drunkenness, or a heavy meal, should throw the perceptive organs into a state of action while the reflecting ones continue asleep, we have a consciousness of objects, colors, or sounds being presented to us, just as if the former organs were actually stimulated by having such impressions communicated to them by the external senses;* while in consequence of the repose of the reflecting organs, we are unable to rectify the illusions, and conceive that the scenes passing before us, or the sounds that we hear, have

* This internal stimulation of particular organs without the concurrence of outward impressions by the senses, is more fully stated under the head of Spectral Illusions.

a real existence. This want of mutual co-operation between the different organs of the brain accounts for the disjointed nature, the absurdities, and incoherencies of dreams.

Many other doctrines have been started by philosophers, but I am not aware of any which can lay claim even to plausibility; some, indeed, are so chimerical, and so totally unsupported by evidence, that it is difficult to conceive how they ever entered into the imaginations of their founders. Baxter, for instance, in his "Treatise on the Immortality of the Soul," endeavors to show that dreams are produced by the agency of some spiritual beings, who either amuse, or employ themselves seriously, in engaging mankind in all those imaginary transactions with which they are employed in dreaming. The theory of Democritus and Lucretius is equally whimsical. They accounted for dreams by supposing that spectres, and simulacra of corporeal things constantly emitted from them, and floating up and down in the air, come and assault the soul in sleep. The most prevailing doctrine is that of the Cartesians, who supposed that the mind was continually active in sleep; in other words, that during this state we were always dreaming. Hazlitt, in his "Round Table," has taken the same view of the subject, and alleges, that if a person is awakened at any given time and asked what he has been dreaming about, he will at once be recalled to a train of associations with which his mind had been busied previously. Un-

fortunately for this theory, it is not sustained by facts; experiments made on purpose having shown that, though in some few instances, the individual had such a consciousness of dreaming as is described, yet in the great majority he had no consciousness of any thing of the kind. The doctrine, therefore, so far as direct evidence is concerned, must fall to the ground; and yet, unsupported as it is either by proof or analogy, this is the fashionable hypothesis of the schools, and the one most in vogue among our best metaphysical writers.

There is a strong analogy between dreaming and insanity. Dr. Abercrombie defines the difference between the two states to be, that in the latter the erroneous impression, being permanent, affects the conduct; whereas in dreaming, no influence on the conduct is produced, because the vision is dissipated on awaking. This definition is nearly, but not wholly correct; for in somnambulism and sleep-talking, the conduct is influenced by the prevailing dream. Dr. Rush has, with great shrewdness, remarked, that a dream may be considered as a transient paroxysm of delirium, and delirium as a permanent dream.

Man is not the only animal subject to dreaming. We have every reason to believe that many of the lower animals do the same. Horses neigh and rear, and dogs bark and growl in their sleep. Probably, at such times, the remembrance of the chase or the combat was passing through the minds of these creatures; and they also not unfrequently

manifest signs of fear, joy, playfulness, and almost every other passion.* Ruminating animals, such as the sheep and cow, dream less; but even they are sometimes so affected, especially at the period of rearing their young. The parrot is said to dream, and I should suppose some other birds do the same. Indeed the more intellectual the animal is, the more likely it is to be subject to dreaming. Whether fishes dream it is impossible to conjecture: nor can it be guessed, with any thing like certainty, at what point in the scale of animal intellect, the capability of dreaming ceases, although it is very certain there is such a point. I apprehend that dreaming is a much more general law than is commonly supposed, and that many animals dream which are never suspected of doing so.

Some men are said never to dream, and others only when their health is disordered: Dr. Beattie mentions a case of the latter description. For many years before his death, Dr. Reid had no consciousness of ever having dreamed; and Mr. Locke takes notice of a person who never did so till his twenty-sixth year, when he began to dream in consequence of having had a fever. It is not impossible, however, but that, in these cases, the individuals may have had dreams from the same

* "The stag-hounds, weary with the chase,
Lay stretched upon the rushy floor,
And urged in dreams the forest race
From Teviot-stone to Eskdale moor."
Lay of the Last Minstrel.

age as other people, and under the same circumstances, although probably they were of so vague a nature, as to have soon faded away from the memory.

Dreams occur more frequently in the morning than in the early part of the night; a proof that the sleep is much more profound in the latter period than in the former. Towards morning, the faculties, being refreshed by sleep, are more disposed to enter into activity: and this explains why, as we approach the hours of waking, our dreams are more fresh and vivid. Owing to the comparatively active state of the faculties, morning dreams are the more rational—whence the old adage, that such dreams are true.

Children dream almost from their birth; and if we may judge from what, on many occasions, they endure during sleep, we must suppose that the visions which haunt their young minds are often of a very frightful kind. Children, from many causes, are more apt to have dreams of terror than adults. In the first place, they are peculiarly subject to various diseases, such as teething, convulsions, and bowel complaints, those fertile sources of mental terror in sleep; and, in the second place, their minds are exceedingly susceptible of dread in all its forms, and prone to be acted on by it, whatever shape it assumes. Many of the dreams experienced at this early period, leave an indelible impression upon the mind. They are remembered in after-years with feelings of pain; and, blending

with the more delightful reminiscences of childhood, demonstrate that this era, which we are apt to consider one varied scene of sunshine and happiness, had, as well as future life, its shadows of melancholy, and was not untinged with hues of sorrow and care. The sleep of infancy, therefore, is far from being that ideal state of felicity which is commonly supposed. It is haunted with its own terrors, even more than that of adults; and, if many of the visions which people it are equally delightful, there can be little doubt that it is also tortured by dreams of a more painful character than often fall to the share of after-life.

In health, when the mind is at ease, we seldom dream; and when we do so our visions are generally of a pleasing character. In disease, especially of the brain, liver, and stomach, dreams are both common and of a very distressing kind.

Some writers imagine, that as we grow older, our dreams become less absurd and inconsistent, but this is extremely doubtful. Probably, as we advance in life, we are less troubled with these phenomena than at the period of youth, when imagination is full of activity, and the mind peculiarly liable to impressions of every kind; but when they do take place, we shall find them equally preposterous, unphilosophical, and crude, with those which haunted our early years. Old people dream more, however, than the middle-aged, owing doubtless to the more broken and disturbed nature of their repose.

I believe that dreams are uniformly the resuscitation or re-embodiment of thoughts which have formerly, in some shape or other, occupied the mind. They are old ideas revived either in an entire state, or heterogeneously mingled together. I doubt if it be possible for a person to have, in a dream, any idea whose elements did not, in some form, strike him at a previous period. If these break loose from their connecting chain, and become jumbled together incoherently, as is often the case, they give rise to absurd combinations; but the elements still subsist, and only manifest themselves in a new and unconnected shape. As this is an important point, and one which has never been properly insisted upon, I shall illustrate it by an example. I lately dreamed that I walked upon the banks of the great canal in the neighborhood of Glasgow. On the side opposite to that on which I was, and within a few feet of the water, stood the splendid portico of the Royal Exchange. A gentleman, whom I knew, was standing upon one of the steps, and we spoke to each other. I then lifted a large stone, and poised it in my hand, when he said that he was certain I could not throw it to a certain spot which he pointed out. I made the attempt, and fell short of the mark. At this moment, a well known friend came up, whom I knew to excel at *putting* the stone; but, strange to say, he had lost both his legs, and walked upon wooden substitutes. This struck me as exceedingly curious; for my impres-

sion was that he had only lost one leg, and had but a single wooden one. At my desire he took up the stone, and, without difficulty, threw it beyond the point indicated by the gentleman upon the opposite side of the canal. The absurdity of this dream is extremely glaring; and yet, on strictly analyzing it, I find it to be wholly composed of ideas which passed through my mind on the previous day, assuming a new and ridiculous arrangement. I can compare it to nothing but to cross readings in the newspapers, or to that well known amusement which consists in putting a number of sentences, each written on a separate piece of paper, into a hat, shaking the whole, then taking them out one by one as they come, and seeing what kind of medley the heterogeneous compound will make, when thus fortuitously put together. For instance, I had, on the above day, taken a walk to the canal, along with a friend. On returning from it, I pointed out to him a spot where a new road was forming, and where, a few days before, one of the workmen had been overwhelmed by a quantity of rubbish falling upon him, which fairly chopped off one of his legs, and so much damaged the other that it was feared amputation would be necessary. Near this very spot there is a park, in which, about a month previously, I practised throwing the stone. On passing the Exchange on my way home, I expressed regret at the lowness of its situation, and remarked what a fine effect the portico would have were

it placed upon more elevated ground. Such were the previous circumstances, and let us see how they bear upon the dream. In the first place, the canal appeared before me. 2. Its situation is an elevated one. 3. The portico of the exchange, occurring to my mind as being placed too low, became associated with the elevation of the canal, and I placed it close by on a similar altitude. 4. The gentleman I had been walking with, was the same whom, in the dream, I saw standing upon the steps of the portico. 5. Having related to him the story of the man who lost one limb, and had a chance of losing another, this idea brings before me a friend with a brace of wooden legs, who, moreover, appears in connexion with putting the stone, as I know him to excel at that exercise. There is only one other element in the dream which the preceding events will not account for, and that is, the surprise at the individual referred to having more than one wooden leg. But why should he have even one, seeing that in reality he is limbed like other people? This also, I can account for. Some years ago he slightly injured his knee while leaping a ditch, and I remember of jocularly advising him to get it cut off. I am particular in illustrating this point with regard to dreams, for I hold, that if it were possible to analyze them all, they would invariably be found to stand in the same relation to the waking state as the above specimen. The more diversified and incongruous the character of a dream, and the

more remote from the period of its occurrence the circumstances which suggest it, the more difficult does its analysis become; and, in point of fact, this process may be impossible, so totally are the elements of the dream often dissevered from their original source, and so ludicrously huddled together. This subject shall be more fully demonstrated in speaking of the remote causes of dreams.

Dreams generally arise without any assignable cause, but sometimes we can very readily discover their origin. Whatever has much interested us during the day, is apt to resolve itself into a dream; and this will generally be pleasurable, or the reverse, according to the nature of the exciting cause. If, for instance, our reading or conversation be of horrible subjects, such as spectres, murders, or conflagrations, they will appear before us magnified and heightened in our dreams. Or if we have been previously sailing upon a rough sea, we are apt to suppose ourselves undergoing the perils of shipwreck. Pleasurable sensations during the day are also apt to assume a still more pleasurable aspect in dreams. In like manner, if we have a longing for any thing, we are apt to suppose that we possess it. Even objects altogether unattainable are placed within our reach: we achieve impossibilities, and triumph with ease over the invincible laws of nature.

A disordered state of the stomach and liver will often produce dreams. Persons of bad digestion, especially hypochondriacs, are harassed with

visions of the most frightful nature. This fact was well known to the celebrated Mrs. Radcliffe, who, for the purpose of filling her sleep with those phantoms of horror which she has so forcibly embodied in the "Mysteries of Udolpho," and "Romance of the Forest," is said to have supped upon the most indigestible substances; while Dryden and Fuseli, with the opposite view of obtaining splendid dreams, are reported to have eaten raw flesh. Diseases of the chest, where the breathing is impeded, also give rise to horrible visions, and constitute the frequent causes of that most frightful modification of dreaming—nightmare.

The usual intoxicating agents have all the power of exciting dreams. The most exquisite visions, as well as the most frightful, are perhaps those occasioned by narcotics. These differences depend on the dose and the particular state of the system at the time of taking it. Dreams also may arise from the deprivation of customary stimuli, such as spirits, or supper before going to bed. More frequently, however, they originate from indulging in such excitations.

A change of bed will sometimes induce dreams; and, generally speaking, they are more apt to occur in a strange bed than in the one to which we are accustomed.

Dreams often arise from the impressions made upon the senses during sleep. Dr. Beattie speaks

of a man on whom any kind of dream could be induced, by his friends gently speaking in his presence upon the particular subject which they wished him to dream about. I have often tried this experiment upon persons asleep, and more than once with a like result. I apprehend, that when this takes place, the slumber must have been very imperfect. With regard to the possibility of dreams being produced by bodily impressions, Dr. Gregory relates that having occasion to apply a bottle of hot water to his feet when he went to bed, he dreamed that he was making a journey to the top of Mount Etna, and that he found the heat of the ground almost insufferable. Another person having a blister applied to his head, imagined that he was scalped by a party of Indians; while a friend of mine happening to sleep in damp sheets, dreamed that he was dragged through a stream. A paroxysm of gout during sleep, has given rise to the person supposing himself under the power of the Inquisition, and undergoing the torments of the rack. The bladder is sometimes emptied during sleep, from the dreaming idea being directed (in consequence of the unpleasant fullness of the viscus) to this particular want of nature. These results are not uniform, but such is the path in which particular bodily states are apt to lead the imagination; and dreams, occuring in these states, will more frequently possess a character analogous to them than to any other — modified, of course, by the strength of the individual cause, and fertility of the fancy.

Some curious experiments in regard to this point, were made by M. Giron de Buzareingues, which seem to establish the practicability of a person determining at will the nature of his dreams. By leaving his knees uncovered, he dreamed that he travelled during night in a dilligence: travellers, he observes, being aware that in a coach it is the knees that get cold during the night. On another occasion, having left the posterior part of his head uncovered, he dreamed that he was present at a religious ceremony performed in the open air. It was the custom of the country in which he lived to have the head constantly covered, except on particular occasions, such as the above. On awaking, he felt the back of his neck cold, as he had often experienced during the real scenes, the representation of which had been conjured up by his fancy. Having repeated this experiment at the end of several days, to assure himself that the result was not the effect of chance, the second vision turned out precisely the same as the first. Even without making experiments, we have frequent evidence of similar facts; thus, if the clothes chance to fall off us, we are liable to suppose that we are parading the streets in a state of nakedness, and feel all the shame and inconvenience which such a condition would in reality produce. We see crowds of people following after us and mocking our nudity; and we wander from place to place, seeking a refuge under this ideal misfortune. Fancy, in truth, heightens every circumstance, and inspires us with

greater vexation than we would feel if actually laboring under such an annoyance. The streets in which we wander are depicted with the force of reality; we see their windings, their avenues, their dwelling-places, with intense truth. Even the inhabitants who follow us are exposed to view in all their various dresses and endless diversities of countenance. Sometimes we behold our intimate friends gazing upon us with indifference, or torturing with annoying impertinence. Sometimes we see multitudes whom we never beheld before; and each individual is exposed so vividly, that we could describe or even paint his aspect.

In like manner, if we lie awry, or if our feet slip over the side of the bed, we often imagine ourselves standing upon the brink of a fearful precipice, or falling from its beetling summit into the abyss beneath.* If the rain or hail patter against our window, we have often the idea of a hundred cataracts pouring from the rocks; if the wind howl without, we are suddenly wrapt up in a thunderstorm, with all its terrible associations; if the head happen to slip under the pillow, a huge rock is hanging over us, and ready to crush us beneath its ponderous bulk. Should the heat of the body chance to be

* Dr. Currie, in allusion to the visions of the hypochondriac observes, that if he dream of falling into the sea, he awakes just as the waters close over him, and is sensible of the precise gurgling sound which those experience who actually sink under water. In falling from heights, during dreams, we always awake before reaching the ground.

increased by febrile irritation or the temperature of the room, we may suppose ourselves basking under the fiery sun of Africa; or if, from any circumstance, we labor under a chill, we may then be careering and foundering among the icebergs of the pole, while the morse and the famished bear are prowling around us, and claiming us for their prey. Dr. Beattie informs us, that once, after riding thirty miles in a high wind, he passed the night in visions terrible beyond description. The extent, in short, to which the mind is capable of being carried in such cases, is almost incredible. Stupendous events arise from the most insignificant causes—so completely does sleep magnify and distort every thing placed within its influence. The province of dreams is one of intense exaggeration—exaggeration beyond even the wildest conceptions of Oriental romance.

A smoky chamber, for instance, has given rise to the idea of a city in flames. The conflagrations of Rome and Moscow may then pass in terrific splendor before the dreamer's fancy. He may see Nero standing afar off, surrounded by his lictors and guards, gazing upon the imperial city wrapt in flames: or the sanguinary fight of Borodino, followed by the burning of the ancient capital of Russia, may be presented before him with all the intenseness of reality. Under these circumstances, his whole being may undergo a change. He is no longer a denizen of his native country, but of that

land to which his visions have transported him. All the events of his own existence fade away; and he becomes a native of Rome or Russia, gazing upon the appalling spectacle.

On the other hand, the mind may be filled with imagery equally exaggerated, but of a more pleasing character. The sound of a flute in the neighborhood may invoke a thousand beautiful and delightful associations. The air is, perhaps, filled with the tones of harps, and all other varieties of music—nay, the performers themselves are visible; and while the cause of this strange scene is one trivial instrument, we may be regaled with a rich and melodious concert. For the same reason a flower being applied to the nostrils may, by affecting the sense of smell, excite powerfully the imagination, and give the dreamer the idea of walking in a garden.

There is one fact connected with dreams which is highly remarkable. When we are suddenly awaked from a profound slumber by a loud knock at, or by the rapid opening of, the door, a train of actions which it would take hours, or days, or even weeks to accomplish, sometimes passes through the mind. Time, in fact, seems to be in a great measure annihilated. An extensive period is reduced, as it were, to a single point, or rather a single point is made to embrace an extensive period. In one instant, we pass through many adventures, see many strange sights, and hear many strange sounds. If we are awaked by a loud knock, we have perhaps the idea of a tumult passing before

us, and know all the characters engaged in it—their aspects, and even their very names. If the door open violently, the flood-gates of a canal may appear to be expanding, and we may see the individuals employed in the process, and hear their conversation, which may seem an hour in length. If a light be brought into the room, the notion of the house being in flames perhaps invades us, and we are witnesses to the whole conflagration from its commencement till it be finally extinguished. The thoughts which arise in such situations are endless, and assume an infinite variety of aspects. The whole, indeed, constitutes one of the strangest phenomena of the human mind, and calls to recollection the story of the Eastern monarch, who, on dipping his head into the magician's water-pail, fancied he had travelled for years in various nations, although he was only immersed for a single instant. This curious psychological fact, though occurring under somewhat different circumstances, has not escaped the notice of Mr. De Quincey, better known as the "English Opium-Eater." "The sense of space," says he, "and, in the end, the *sense of time* were both powerfully affected. Buildings, landscapes, &c., were exhibited in proportions so vast as the bodily eye is not fitted to receive. Space swelled, and was amplified to an extent of unutterable infinity. This, however, did not disturb me so much as the expansion of time. I sometimes seemed to have lived for seventy or a hundred years in one night; nay, sometimes had

feelings representative of a millennium passed in that time, or, however, of a duration far beyond the limits of any human experience." It is more easy to state the fact of this apparent expansion of time in dreams than to give any theory which will satisfactorily account for it. I believe that, whenever it occurs, the dream has abounded in events and circumstances which, had they occurred in reality, would have required a long period for their accomplishment. For instance, I lately dreamed that I made a voyage to India—remained some days in Calcutta—then took ship for Egypt, where I visited the cataracts of the Nile, and the Pyramids: and, to crown the whole, had the honor of an interview with Mehemet Ali, Cleopatra, and the Sultan Saladin. All this was the work of a single night, probably of a single hour, or even a few minutes; and yet it appeared to occupy many months.

I must also mention another circumstance of a somewhat similar kind, which, though it occur in the waking condition, is produced by the peculiar effect of previous sleep upon the mind. Thus, when we awake in a melancholy mood, the result probably of some distressing dream, the remembrance of all our former actions, especially those of an evil character, often rushes upon us as from a dark and troubled sea.* They do not appear in-

* Something similar occurs in drowning. Persons recovered from this state have mentioned that, in the course of a single minute, almost every event of their life has been brought to their recollection.

dividually, one by one, but come linked together in a close phalanx, as if to take the conscience by storm, and crush it beneath their imposing front. The whole span of our existence, from childhood downwards, sends them on; oblivion opens its gulphs and impels them forwards; and the mind is robed in a cloud of wretchedness, without one ray of hope to brighten up its gloom. In common circumstances, we possess no such power of grouping so instantaneously the most distant and proximate events of life: the spell of memory is invoked to call them successively from the past; and they glide before us like shadows, more or less distinct according to their remoteness, or the force of their impress upon the mind. But in the case of which I speak, they start abruptly forth from the bosom of time, and overwhelm the spirit with a crowd of most sad and appalling reminiscences. In the crucible of our distorted imagination, every thing is exaggerated and invested with a blacker gloom than belongs to it; we see, at one glance, down the whole vista of time; and each event of our life is written there in gloomy and distressing characters. Hence the mental depression occurring under these circumstances, and even the remorse which falls, like bitter and unrefreshing dews, upon the heart.

We have seldom any idea of past events in dreams; if such are called forth, they generally seem to be present and in the process of actual occurrence. We may dream of Alexander the

great, but it is as of a person who is co-existent with ourselves.

Dreams being produced by the active state of such organs as are dissociated from, or have not sympathised in, the general slumber, partake of the character of those whose powers are in greatest vigor, or farthest removed from the somnolent state. A person's natural character, therefore, or his pursuits in life, by strengthening one faculty, make it less susceptible, than such as are weaker, of being overcome by complete sleep; or, if it be overcome, it awakes more rapidly from its dormant state, and exhibits its proper characteristics in dreams. Thus, the miser dreams of wealth, the lover of his mistress, the musician of melody, the philosopher of science, the merchant of trade, and the debtor of duns and bailiffs. In like manner, a choleric man is often passionate in his sleep; a vicious man's mind is filled with wicked actions; a virtuous man's with deeds of benevolence; a humorist's with ludicrous ideas. Pugnacious people often fight on such occasions, and do themselves serious injury by striking against the posts of the bed; while persons addicted to lying, frequently dream of exercising their favorite vocation.

For such reasons persons who have a strong passion for music often dream of singing and composing melodies; and the ideas of some of our finest pieces are said to have been communicated to the musician in his sleep. Tartini, a celebrated violin player, is said to have composed his famous

Devil's Sonata from the inspiration of a dream, in which the Devil appeared to him and challenged him to a trial of skill upon his own fiddle. A mathematician, in like manner, is often engaged in the solution of problems, and has his brain full of Newton, Euler, Euclid, and Laplace: while a poet is occupied in writing verses, or in deliberating upon the strains of such bards as are most familiar to his spirit; it was thus in a dream that Mr. Coleridge composed his splendid fragment of Kubla Khan.* To speak phrenologically: if the

* The following is the account he himself gives of the circumstance: — "In the summer of the year 1797, the author, then in ill health, had retired to a lonely farm-house between Porlock and Linton, on the Exmoor confines of Somerset and Devonshire. In consequence of a slight indisposition, an anodyne had been prescribed, from the effects of which he fell asleep in his chair at the moment that he was reading the following sentence, or words of the same substance, in 'Purchas's Pilgrimage:' — 'Here the Khan Kubla commanded a palace to be built, and a stately garden thereunto. And thus ten miles of fertile ground were enclosed with a wall.' The author continued for about three hours in a profound sleep, at least of the external senses, during which time he had the most vivid confidence, that he could not have composed less than from two to three hundred lines; if that indeed can be called composition in which all the images rose up before him as *things*, with a parallel production of the correspondent expressions, without any sensation or consciousness of effort. On awaking, he appeared to himself to have a distinct recollection of the whole: and taking his pen, ink, and paper instantly and eagerly wrote down the lines that are here preserved. At this moment he was unfortunately called out by a person on business from Porlock, and detained by him above an hour; and on his return to his room, found, to his no small surprise and mortification, that though he still retained some vague and dim recollection of the general pur-

organ of *size* be large, then material images more than sounds or abstractions possess the mind, and every thing may be magnified to unnatural dimensions ; if *color* be fully developed, whatever is presented to the mental eye is brilliant and gaudy, and the person has probably the idea of rich paintings, shining flowers, or varied landscapes ; should *locality* predominate, he is carried away to distant lands, and beholds more extraordinary sights than Cook, Ross, or Franklin ever described. An excess of *cautiousness* will inspire him with terror ; an excess of *self-esteem* cause him to be placed in dignified situations ; while *imitation* may render him a mimic or a player ; *language*, a wrangler or philologist ; *secretiveness*, a deceiver ; *acquisitiveness*, a thief. Occasionally, indeed, the reverse is the case, and those trains of thought in which we mostly indulge are seldon or never the subjects of our dreams. Some authors even assert that when the mind has been strongly impressed with any peculiar ideas, such are less likely to occur in dreams than their opposites ; but this is taking the exception for the general rule, and is directly at variance with both experience and analogy. In fact, whatever propensities or talents are strongest in the mind of the individual, will, in most cases, manifest themselves with greatest readiness and

port of the vision ; yet, with the exception of some eight or ten scattered lines and images, all the rest had passed away like the images on the surface of a stream into which a stone had been cast, but alas ! without the after restoration of the latter."

force in dreams; and where a faculty is very weak it will scarcely manifest itself at all. Thus, one person who has large *tune* and small *causality* will indulge in music, but seldom in ascertaining the nature of cause and effect; while another, with a contrary disposition of organs, may attempt to reason upon abstract truths, while music will rarely intrude into the temple of his thoughts. It is but fair to state, however, that the compositions, the reasonings and the poems which we concoct in sleep, though occasionally superior to those of our waking hours,* are generally of a very absurd description; and, how admirable soever they may have appeared, their futility is abundantly evident when we awake. To use the words of Dr. Parr, "In dreams we seem to reason, to argue, to compose; and in all these circumstances, during sleep, we are highly gratified, and think that we excel. If, however, we remember our dreams, our reasonings we find to be weak, our arguments we find to be inconclusive, and our compositions trifling and absurd." The truth of these remarks is undeniable; but the very circumstance of a man's dreams turning habitually upon a particular subject—however ridiculously he may meditate thereupon—is a strong presumption that that subject is the

* Such was the case with Cabanis, who often, during dreams, saw clearly into the bearings of political events which had baffled him when awake; and with Condorcet, who, when engaged in some deep and complicated calculations, was frequently obliged to leave them in an unfinished state, and retire to rest, when the results to which they led were at once unfolded in his dreams.

one which most frequently engrosses his faculties in the waking state; in a word, that the power most energetic in the latter condition is that also most active in dreams.

Dreams are sometimes useful in affording prognostics of the probable termination of several diseases. Violent and impetuous dreams occurring in fevers generally indicate approaching delirium; those of a gloomy, terrific nature give strong grounds to apprehend danger; while dreams of a pleasant cast may be looked upon as harbingers of approaching recovery. The visions, indeed, which occur in a state of fever are highly distressing; the mind is vehemently hurried on from one train of ideas to another, and participates in the painful activity of the system. Those generated by hypochondria or indigestion are equally afflicting, but more confined to one unpleasant idea—the intellect being overpowered, as it were, under the pressure of a ponderous load, from which it experiences an utter incapacity to relieve itself. The febrile dream has a fiery, volatile, fugitive character: the other partakes of the nature of nightmare, in which the faculties seem frozen to torpor, by the presence of a loathsome and indolent fiend.

Other diseases and feelings besides fever give a character to dreams. The dropsical subject often has the idea of fountains, and rivers, and seas, in his sleep; jaundice tinges the objects beheld with its own yellow and sickly hue; hunger induces dreams of eating agreeable food; an attack of in-

flammation disposes us to see all things of the color of blood; excessive thirst presents us with visions of dried up streams, burning sand-plains, and immitigable heat; a bad taste in the mouth, with every thing bitter and nauseous in the vegetable world.

If, from any cause, we chance to be relieved from the physical suffering occasioning such dreams, the dreams themselves also wear away, or are succeeded by others of a more pleasing description. Thus, if perspiration succeed to feverish heat, the person who, during the continuance of the latter, fancied himself on the brink of a volcano, or broiled beneath an African sun, is transported to some refreshing stream, and enjoys precisely the pleasure which such a transition would produce did it actually take place.

Some authors imagine that we never dream of objects which we have not seen; but the absurdity of this notion is so glaring as to carry its own refutation along with it. I have a thousand times dreamed of such objects.

When a person has a strong desire to see any place or object which he has never seen before, he is apt to dream about it; while, as soon as his desire is gratified, he often ceases so to dream. I remember of hearing a great deal of the beauty of Rouen Cathedral, and in one form or other it was constantly presented before my imagination in dreams; but having at last seen the cathedral I never again dreamed about it. This is not the

invariable result of a gratified wish; but it happens so often that it may be considered a general rule.

Sometimes we awake from dreams in a pleasing at other times in a melancholy mood, without being able to recollect them. They leave a pleasurable or disagreeable impression upon the mind, according doubtless to their nature; and yet we cannot properly remember what we were dreaming about. Sometimes, though baffled at the time, we can recall them afterwards, but this seldom happens.

It often happens that the dreamer, under the influence of a frightful vision, leaps from his bed and calls aloud in a paroxysm of terror. This is very frequently the case with children and persons of weak nerves; but it may happen even with the strongest minded. There is something peculiarly horrible and paralyzing in the terror of sleep. It lays the energies of the soul prostrate before it, crushes them to the earth as beneath the weight of an enormous vampyre, and equalizes for a time the courage of the hero and the child. No firmness of mind can at all times withstand the influence of these deadly terrors. The person awakes panic-struck from some hideous vision; and even after reason returns and convinces him of the unreal nature of his apprehensions, the panic for some time continues, his heart throbs violently, he is covered with cold perspiration, and hides his head beneath the bed-clothes, afraid to look around

him, lest some dreadful object of alarm should start up before his affrighted vision. Courage and philosophy are frequently opposed in vain to these appalling terrors. The latter dreads what it disbelieves; and spectral forms, sepulchral voices, and all the other horrid superstitions of sleep arise to vindicate their power over that mind, which, under the fancied protection of reason and science, conceived itself shielded from all such attacks, but which, in the hour of trial, often sinks beneath their influence as completely as the ignorant and unreflecting hind, who never employed a thought as to the real nature of these fantastic and illusive sources of terror. The alarm of a frightful dream is sometimes so overpowering, that persons under the impression thus generated, of being pursued by some imminent danger, have actually leaped out of the window to the great danger and even loss of their lives. In the 9th volume of the "Philosophical Transactions of the Royal Society of London," a curious case is given by Archdeacon Squire, of a person who, after having been dumb for years, recovered the use of his speech by means of a dream of this description: "One day, in the year 1741, he got very much in liquor, so much so, that on his return home at night to the Devizes, he fell from his horse three or four times, and was at last taken up by a neighbor, and put to bed in a house on the road. He soon fell asleep; when, dreaming that he was falling into a furnace of boiling wort, it put him into so great an agony

of fright, that, struggling with all his might to call out for help, he actually did call out aloud, and recovered the use of his tongue that moment, as effectually as he ever had it in his life, without the least hoarseness or alteration in the old sound of his voice."

There have been instances where the terror of a frightful dream has been so great as even to produce insanity. Many years ago, a woman in the West Highlands, in consequence of a dream of this kind, after being newly brought to bed, became deranged, and soon after made her escape to the mountains, where for seven years, she herded with the deer, and became so fleet that the shepherds and others, by whom she was occasionally seen, could never arrest her. At the end of this term, a very severe storm brought her and her associates to the valley, when she was surrounded, caught, and conveyed to her husband, by whom she was cordially received and treated with the utmost kindness. In the course of three months, she regained her reason, and had afterwards several children. When caught, her body is said to have been covered with hair, thus giving a color to the story of Orson and other wild men of the wood.

Instances have not been wanting where, under the panic of a frightful vision, persons have actually committed murder. They awake from such a dream—they see some person standing in the room, whom they mistake for an assassin, or dreadful apparition: driven to desperation by terror, they

seize the first weapon that occurs, and inflict a fatal wound upon the object of their alarm. Hoffbauer, in his Treatise on Legal Medicine, relates a case of this kind. Although he does not state that the circumstances which occasioned the panic was a previous dream of terror, I do not doubt that such, in reality, must have been the case. "A report," says he, "of the murder committed by Bernard Schidmaizig was made by the Criminal College of Silesia. Schidmaizig awoke suddenly at midnight: at the moment of awaking, he beheld a frightful phantom (at least his imagination so depicted it) standing near him, (in consequence of the heat of the weather he slept in an open coach-house). Fear, and the obscurity of the night, prevented him from recognising any thing distinctly, and the object which struck his vision appeared to him an actual spectre. In a tremulous tone, he twice called out, *who goes there?*—he received no answer, and imagined that the apparition was approaching him. Frightened out of his judgment, he sprung from his bed, seized a hatchet which he generally kept close by him, and with this weapon assaulted the imaginary spectre. To see the apparition, to call out *who goes there?* and to seize the hatchet were the work of a moment: he had not an instant for reflection, and with one blow the phantom was felled to the ground. Schidmaizig uttered a deep groan. This, and the noise occasioned by the fall of the phantom, completely restored him to his senses; and all at once

the idea flashed across his mind that he must have struck down his wife, who slept in the same coach-house. Falling instantly upon his knees, he raised the head of the wounded person, saw the wound which he had made, and the blood that flowed from it; and in a voice full of anguish exclaimed *Susannah, Susannah, come to yourself!* He then called his eldest daughter, aged eight years, ordered her to see if her mother was recovering, and to inform her grandmother that he had killed her. In fact, it was his unhappy wife who received the blow, and she died the next day."*

The passion of horror is more frequently felt in dreams than at any other period. Horror is intense dread, produced by some unknown or superlatively disgusting object. The visions of sleep, therefore, being frequently undefined, and of the most revolting description, are apt to produce this emotion, as they are to occasion simple fear. Under its influence, we may suppose that fiends are lowering upon us; that dismal voices, as from the bottomless pit, or from the tomb, are floating around

* This case is highly important in a legal point of view; and to punish a man for acting similarly in such a state would be as unjust as to inflict punishment for deeds committed under the influence of insanity or somnambulism. "This man," as Hoffbauer properly remarks, "did not enjoy the free use of his senses: he knew not what he saw: he believed that he was repulsing an unlooked-for attack. He soon recognized the place where he usually slept: it was natural that he should seize the hatchet since he had taken the precaution to place it beside him; but the idea of his wife and the possibility of killing her were the last things that occurred to him."

us; that we are haunted by apparitions; or that serpents, scorpions and demons are our bed-fellows. Such sensations are strongly akin to those of nightmare; but between this complaint and a mere dream of terror, there is a considerable difference. In incubus, the individual feels as if his powers of volition were totally paralyzed; and as if he were altogether unable to move a limb in his own behalf, or utter a cry expressive of his agony. When these feelings exist, we may consider the case to be one of nightmare: when they do not, and when, notwithstanding his terror, he seems to himself to possess unrestrained muscular motion, to run with ease, breathe freely, and enjoy the full capability of exertion, it must be regarded as a simple dream.

Dr. Elliotson has remarked, with great acuteness, that dreams, in which the perceptive faculties alone are concerned, are more incoherent, and subject to more rapid transitions than those in which one or more of the organs of the feelings are also in a state of activity. "Thus, in our dreams, we may walk on the brink of a precipice, or see ourselves doomed to immediate destruction by the weapon of a foe, or the fury of a tempestuous sea, and yet feel not the slightest emotion of fear, though, during the perfect activity of the brain, we may be naturally disposed to the strong manifestation of this feeling; again we may see the most extraordinary object or event without surprise, perform the most ruthless crime without compunc-

tion, and see what, in our waking hours, would cause us unmitigated grief, without the smallest feeling of sorrow."

Persons are to be found, who, when they speak much during sleep, are unable to remember their dreams on awaking, yet recollect them perfectly if they do not speak. This fact is not very easily accounted for. Probably when we are silent, the mind is more directed upon the subject of the dream, and not so likely to be distracted from it. There is perhaps another explanation. When we dream of speaking, or actually speak, the necessity of using language infers the exercise of some degree of reason; and, thus the incongruities of the dream being diminished, its nature becomes less striking, and consequently less likely to be remembered. Though we often dream of performing impossibilities, we seldom imagine that we are relating them to others.

When we dream of visible objects, the sensibility of the eyes is diminished in a most remarkable manner; and on opening them, they are much less dazzled by the light than if we awoke from a slumber altogether unvisited by such dreams. A fact equally curious is noticed by Dr. Darwin, in his "Zoonomia,"—"If we sleep in the daytime, and endeavour to see some object in our dreams, the light is exceedingly painful to our eyes; and, after repeated struggles, we lament in our sleep that we cannot see it. In this case, I apprehend, the eyelid is in some measure opened

by the vehemence of our sensations; and the iris being dilated, shows as great, or greater sensibility than in our waking hours."

There are some persons to whom the objects of their dreams are always represented in a soft, mellow lustre, similar to twilight. They never seem to behold any thing in the broad glare of sunshine; and, in general, the atmosphere of our vision is less brilliant than that through which we are accustomed to see things while awake.

The most vivid dreams are certainly those which have reference to sight. With regard to hearing, they are less distinctly impressed upon the mind, and still more feebly as regards smell, or taste. Indeed, some authors are of opinion that we never dream of sounds, unless when a sound takes place to provoke the dream: and the same with regard to smell and taste; but this doctrine is against analogy, and unsupported by proof. There are, beyond doubt, certain parts of the brain which take cognizance of tastes, odors, and sounds, for the same reason that there are others which recognise forms, dimensions, and colors. As the organs of the three latter sensations are capable of inward excitement, without any communication, by means of the senses, with the external world, it is no more than analogical to infer that, with the three former, the same thing may take place. In fever, although the individual is ever so well protected against the excitement of external sounds, the internal organ is often

violently stimulated, and he is harassed with tumultuous noises. For such reasons, it is evident that there may be in dreams a consciousness of sounds, of tastes, and of odors, where such have no real existence from without.

Dreams are sometimes exceedingly obscure, and float like faint clouds over the spirit. We can then resolve them into nothing like shape or consistence, but have an idea of our minds being filled with dim, impalpable imagery, which is so feebly impressed upon the tablet of memory, that we are unable to embody it in language, or communicate its likeness to others.

At other times, the objects of sleep are stamped with almost supernatural energy. The dead, or the absent, whose appearance to our waking faculties had become faint and obscure, are depicted with intense truth and reality; and even their voices, which had become like the echo of a forgotten song, are recalled from the depths of oblivion, and speak to us as in former times. Dreams, therefore, have the power of brightening up the dim regions of the past, and presenting them with a force which the mere effects of unassisted remembrance could never have accomplished in our waking hours.

This property of reviving past images, is one of the most remarkable possessed by sleep. It even goes the length, in some cases, of recalling circumstances which had been entirely forgotten, and presenting them to the mind with more than the

force of their original impression. This I conceive to depend upon a particular part of the brain—that, for instance, which refers to the memory of the event—being preternaturally excited; hence forgotten tongues are sometimes brought back to the memory in dreams, owing doubtless to some peculiar excitement of the organ of *Language*. The dreamer sometimes converses in a language of which he has no knowledge whatever when he awakes, but with which he must at one period have been acquainted. Phenomena of a similar kind occasionally occur in madness, delirium, or intoxication, all of which states have an analogy to dreaming. It is not uncommon, for instance, to witness in the insane an unexpected and astonishing resuscitation of knowledge—an intimacy with events and languages of which they were entirely ignorant in the sound state of their minds. In like manner, in the delirium attendant upon fevers, people sometimes speak in a tongue* they

* A girl was seized with a dangerous fever, and, in the delirious paroxysm accompanying it, was observed to speak in a strange language which, for some time, no one could understand. At last it was ascertained to be Welsh—a tongue she was wholly ignorant of at the time she was taken ill, and of which she could not speak a single syllable after her recovery. For some time the circumstance was unaccountable, till, on inquiry, it was found she was a native of Wales, and had been familiar with the language of that country in her childhood, but had wholly forgotten it afterwards. During the delirium of fever, the obliterated impressions of infancy were brought to her mind, and continued to operate there so long as she remained under the mental excitation

know nothing of in health; and in drunkenness events are brought to the memory which desert it in a state of sobriety.* Analogous peculiarities occur in dreams. Forgotten facts are restored to the mind. Sometimes those adhere to it and are remembered when we awake: at other times—as can be proved in cases of sleep-talking—they vanish with the dream which called them into existence, and are recollected no more.

I believe that the dreams of the aged, like their memory, relate chiefly to the events of early life, and less to those of more recent occurrence. My friend, Dr. Cumin, has mentioned to me the case of one of his patients, a middle-aged man, whose visions assumed this character in consequence of severe mental anxiety. Owing to misfortunes in trade, his mind had been greatly depressed: he lost his appetite, became restless, nervous, and dejected; such sleep as he had was filled with incessant dreams, which at first were entirely of events connected with the earliest period of his life, so far as he recollected it, and never by any

occasioned by the disease, but no longer; for so soon as the state of mind which recalled these impressions was removed, they also disappeared, and she was as ignorant of Welsh as before she was taken ill.

* Mr. Combe mentions the case of an Irish porter to a warehouse, who, in one of his drunken fits, left a parcel at the wrong house, and when sober could not recollect what he had done with it; but the next time he got drunk, he recollected where he had left it, and went and recovered it.

chance of late events. In proportion as he recovered from this state, the dreams changed their character, and referred to circumstances farther on in life; and so regular was the progression, that, with the march of his recovery, so was the onward march of his dreams. During the worst period of his illness, he dreamed of occurrences which happened in boyhood: no sooner was convalescence established than his visions had reference to manhood; and on complete recovery they were of those recent circumstances which had thrown him into bad health. In this curious case, one lateral half of the head was much warmer than the other. This was so remarkable as to attract the notice of the barber who shaved it.

One of the most remarkable phenomena of dreams is the absence of surprise. This, indeed, is not invariable, as every one must occasionally have felt the sensation of surprise, and been not a little puzzled in his visions to account for the phenomena which present themselves; but, as a general rule, its absence is so exceedingly common, that, when surprise does occur, it is looked upon as an event out of the common order, and remarked accordingly. Scarcely any event, however incredible, impossible, or absurd, gives rise to this sensation. We see circumstances at utter variance with the laws of nature, and yet their discordancy, impracticability, and oddness, seldom strike us as at all out of the usual course of things. This is one of the strongest proofs that

can be alleged in support of the dormant condition of the reflecting faculties. Had these powers been awake, and in full activity, they would have pointed out the erroneous nature of the impressions conjured into existence by fancy : and shown us truly that the visions passing before us were merely the chimeras of excited imagination—the airy phantoms of imperfect sleep.

In visions of the dead, we have a striking instance of the absence of surprise. We almost never wonder at beholding individuals whom we yet know, in our dreams, to have even been buried for years. We see them among us, and hear them talk, and associate with them on the footing of fond companionship. Still the circumstance seldom strikes us with wonder, nor do we attempt to account for it. They still seem alive as when they were on earth, only all their qualities, whether good or bad, are exaggerated by sleep. If we hated them while in life, our animosity is now exaggerated to a double degree. If we loved them, our affection becomes more passionate and intense than ever. Under these circumstances, many scenes of most exquisite pleasure often take place. The slumberer supposes himself enjoying the communionship of those who were dearer to him than life, and has far more intense delight than he could have experienced, had these individuals been in reality alive, and at his side.

"I hear thy voice in dreams
Upon me softly call,

Like echo of the mountain streams
In sportive waterfall:
I see thy form, as when
Thou wert a living thing,
And blossomed in the eyes of men
Like any flower of spring."

Nor is the passion of love, when experienced in dreams, less vivid than any other emotion, or the sensations to which it gives rise less pleasurable. I do not here allude to the passion in its physical sense, but to that more moral and intellectual feeling, the result of deep sensibility and attachment. Men who never loved before, have conceived a deep affection to some particular woman in their dreams, which, continuing to operate upon them after they awoke, has actually terminated in a sincere and lasting fondness for the object of their visionary love. Men, again, who actually are in love, dream more frequently of this subject than of any thing else—fancying themselves in the society of their mistresses, and enjoying a happiness more exquisite than is compatible with the waking state—a happiness, in short, little removed from celestial. Such feelings are not confined to men; they pervade the female breast with equal intensity; and the young maiden, stretched upon the couch of sleep, may have her spirit filled with the image of her lover, while her whole being swims in the ecstacies of impassioned, yet virtuous attachment. At other times, this pure passion may, in both sexes, be blended with one of a

grosser character; which also may acquire an increase of pleasurable sensation: to such an extent is every circumstance, whether of delight or suffering, exaggerated by sleep.

For the same reason that the lover dreams of love, does the newly married woman dream of children. They, especially if she have a natural fondness for them—if she herself be pregnant, or possess an ardent longing for offspring—are often the subject of her sleeping thoughts; and she conceives herself to be encircled by them, and experiencing intense pleasure in their innocent society. Men who are very fond of children often experience the same sensations; and both men and women who are naturally indifferent in this respect, seldom dream about them, and never with any feelings of peculiar delight.

During the actual process of any particular dream, we are never conscious that we are really dreaming: but it sometimes happens that a second dream takes place, during which we have a consciousness, or a suspicion, that the events which took place in the first dream were merely visionary, and not real. People, for instance, sometimes fancy in sleep, that they have acquired wealth: this may be called the first dream; and during its progress they never for a moment doubt the reality of their impressions; but a second one supervenes upon this, and they then begin to wonder whether their riches be real or imaginary—in other words, they try to ascertain whether they had been previously

dreaming or not. But even in the second dream we are unconscious of dreaming. We still seem to ourselves to be broad awake—a proof that in dreams we are never aware of being asleep. This unconsciousness of being asleep during the dreaming state, is referrible to the quiescent condition of the reasoning powers. The mind is wholly subject to the sceptre of other faculties; and whatever emotions or images they invoke, seem to be real, for want of a controlling power to point out their true character.

> "You stood before me like a thought,
> A dream remembered in a dream."

Those troubled with deafness do not hear distinctly such sounds as they conceive to be uttered during sleep. Dr. Darwin speaks of a gentleman who, for thirty years, had entirely lost his hearing, and who in his dreams never seemed to converse with any person except by the fingers or in writing: he never had the impression of hearing them speak. In like manner, a blind man seldom dreams of visible objects, and never if he has been blind from his birth. Dr. Blacklock, indeed, who became blind in early infancy, may seem an exception to this rule. While asleep, he was conscious of a sense which he did not possess in the waking state, and which bears some analogy to sight. He imagined that he was united to objects by a sort of distant contact, which was effected by

threads or strings passing from their bodies to his own.

The illusion of dreams is much more complete than that of the most exquisite plays. We pass, in a second of time, from one country to another; and persons who lived in the most different ages of the world are brought together in strange and incongruous confusion. It is not uncommon to see, at the same moment, Robert the Bruce, Julius Cæsar, and Marlborough in close conversation. Nothing, in short, however monstrous, incredible, or impossible, seems absurd. Equally striking examples of illusion occur when the person awakes from a dream, and imagines that he hears voices or beholds persons in the room beside him. In the first cases we are convinced, on awaking, of the deceptive nature of our visions, from the utter impossibility of their occurrence; they are at variance with natural laws; and a single effort of reason is sufficient to point out their absolute futility. But when the circumstances which seem to take place are not in themselves conceived impossible, however unlikely they may be, it is often a matter of the utmost difficulty for us to be convinced of their real character. On awaking, we are seldom aware that, when they took place, we labored under a dream. Such is their deceptive nature, and such the vividness with which they appear to strike our senses, that we imagine them real; and accordingly often start up in a paroxysm of terror, having the idea that our chamber is in-

vaded by thieves, that strange voices are calling upon us, or that we are haunted by the dead. When there is no way of confuting these impressions, they often remain ineradicably fixed in the mind, and are regarded as actual events, instead of the mere chimeras of sleep. This is particularly the case with the weak-minded and superstitious, whose feelings are always stronger than their judgments; hence the thousand stories of ghosts and warnings with which the imaginations of these persons are haunted—hence the frequent occurrence of nocturnal screaming and terror in children, whose reflecting faculties are naturally too weak to correct the impressions of dreams, and point out their true nature—hence the painful illusions occurring even to persons of strong intellect, when they are debilitated by watchfulness, long-continued mental suffering, or protracted disease. These impressions often arise without any apparent cause: at other times, the most trivial circumstances will produce them. A voice, for instance, in a neighboring street, may seem to proceed from our own apartment, and may assume a character of the most appalling description; while the tread of footsteps, or the knocking of a hammer over-head, may resolve itself into a frightful figure stalking before us.

"I know," says Mr. Waller, "a gentleman, who is living at this moment a needless slave to terror, which arises from a circumstance which admits easily of explanation. He was lying in his bed

with his wife, and, as he supposed, quite awake, when he felt distinctly the impression of some person's hand upon his right shoulder, which created such a degree of alarm that he dared not to move himself in bed, and indeed could not, if he had possessed the courage. It was some time before he had it in his power to awake his wife, and communicate to her the subject of his terror. The shoulder which had felt the impression of the hand, continued to feel benumbed and uncomfortable for some time. It had been uncovered, and, most probably, the *cold* to which it was exposed was the cause of the phenomenon."*

An attack of dreaming illusion, not, however, accompanied with any unpleasant feeling, occurred to myself lately. I had fallen accidentally asleep upon an arm-chair, and was suddenly awaked by hearing, as I supposed, two of my brothers talking and laughing at the door of the room, which stood wide open. The impressions were so forcible, that I could not believe them fallacious, yet I ascertained that they were so entirely; for my brothers had gone to the country an hour before, and did not return for a couple of hours afterwards.

There are few dreams involving many circumstances, which are, from beginning to end, perfectly philosophical and harmonious: there is usually some absurd violation of the laws of consistency,

* Waller's "Treatise on the Incubus or Nightmare."

a want of congruity, a deficiency in the due relations of cause and effect, and a string of conclusions altogether unwarranted by the premises. Mr. Hood, in his "Whims and Oddities," gives a curious illustration of the above facts. "It occurred," says he, "when I was on the eve of marriage, a season when, if lovers sleep sparingly, they dream profusely. A very brief slumber sufficed to carry me, in the night coach, to Bogner. It had been concerted between Honoria and myself that we should pass the honey-moon at some such place upon the coast. The purpose of my solitary journey was to procure an appropriate dwelling, and which, we had agreed upon, should be a little pleasant house, with an indispensable look-out upon the sea. I chose one accordingly, a pretty villa, with bow windows, and a prospect delightfully marine. The ocean murmur sounded incessantly from the beach. A decent elderly body, in decayed sables, undertook on her part to promote the comfort of the occupants by every suitable attention, and, as she assured me, at a very reasonable rate. So far the nocturnal faculty had served me truly: a day dream could not have proceeded more orderly: but, alas! just here, when the dwelling was selected, the sea-view was secured, the rent agreed upon, when every thing was plausible, consistent, and rational, the incoherent fancy crept in, and confounded all—by marrying me to the old woman of the house!"

There are no limits to the extravagancies of

those visions sometimes called into birth by the vivid exercise of the imagination. Contrasted with them, the wildest fictions of Rabelais, Ariosto, or Dante, sink into absolute probabilities. I remember of dreaming on one occasion that I possessed ubiquity, twenty resemblances of myself appearing in as many different places, in the same room; and each being so thoroughly possessed by my own mind, that I could not ascertain which of them was myself, and which my double, &c. On this occasion, fancy so far travelled into the regions of absurdity, that I conceived myself riding upon my own back—one of the resemblances being mounted upon another, and both animated with the soul appertaining to myself, in such a manner that I knew not whether I was the *carrier* or the *carried*. At another time, I dreamed that I was converted into a mighty pillar of stone, which reared its head in the midst of a desert, where it stood for ages, till generation after generation melted away before it. Even in this state, though unconscious of possessing any organs of sense, or being else than a mass of lifeless stone, I saw every object around—the mountains growing bald with age—the forest trees drooping in decay; and I heard whatever sounds nature is in the custom of producing, such as the thunder-peal breaking over my naked head, the winds howling past me, or the ceaseless murmur of streams. At last I also waxed old, and began to crumble into dust, while the moss and ivy accumulated upon me, and

stamped me with the aspect of hoar antiquity. The first of these visions may have arisen from reading Hoffman's "Devil's Elixir," where there is an account of a man who supposed he had a double, or, in other words, was both himself and not himself; and the second had perhaps its origin in the Heathen Mythology, a subject to which I am extremely partial, and which abounds in stories of metamorphosis.

Such dreams as occur in a state of drunkenness are remarkable for their extravagance. Exaggeration beyond limits is a very general attendant upon them; and they are usually of a more airy and fugitive character than those proceeding from almost any other source. The person seems as if he possessed unusual lightness, and could mount into the air, or float upon the clouds, while every object around him reels and staggers with emotion. But of all dreams, there are none which, for unlimited wildness, equal those produced by narcotics. An eminent artist, under the influence of opium, fancied the ghastly figures in Holbein's "Dance of Death" to become vivified—each grim skeleton being endowed with life and motion, and dancing and grinning with an aspect of hideous reality. The "English Opium Eater," in his "Confessions," has given a great variety of eloquent and appalling descriptions of the effects produced by this drug upon the imagination during sleep. Listen to one of them:—

"Southern Asia is, and has been for thousands

of years, the part of the earth most swarming with human life; the great *officina gentium*. Man is a weed in those regions. The vast empires, also, into which the enormous population of Asia has always been cast, give a farther sublimity to the feelings associated with all Oriental names or images. In China, over and above what it has in common with the rest of Southern Asia, I am terrified by the modes of life, by the manners, and the barrier of utter abhorrence and want of sympathy placed between us by feelings deeper than I can analyze. I could sooner live with lunatics or brute animals. All this, and much more than I can say, or have time to say, the reader must enter into before he can comprehend the unimaginable horror which these dreams of Oriental imagery and mythological tortures impressed upon me. Under the connecting feeling of tropical heat and vertical sunlights, I brought together all creatures, birds, beasts, reptiles, all trees and plants, usages and appearances, that are found in all tropical regions, and assembled them together in China or Indostan. From kindred feelings I soon brought Egypt and all her gods under the same law. I was stared at, hooted at, grinned at, chattered at, by monkeys, by paroquets, by cockatoos. I ran into pagodas: and was fixed for centuries at the summit, or in the secret rooms; I was the idol; I was the priest; I was worshipped; I was sacrificed. I fled from the wrath of Brama through all the forests of Asia: Vishnu hated me: Seeva laid in wait for me. I came sudden-

ly upon Isis and Osiris: I had done a deed, they said, which the ibis and the crocodile trembled at. I was buried for a thousand years, in stone coffins, with mummies and spinxes, in narrow chambers, at the heart of eternal pyramids. I was kissed, with cancerous kisses, by crocodiles, and laid confounded with all unutterable slimy things, amongst reeds and Nilotic mud."

Again: "Hitherto the human face had mixed often in my dreams, but not so despotically, nor with any special power of tormenting. But now that which I have called the tyranny of the human face began to unfold itself. Perhaps some part of my London life might be answerable for this. Be that as it may, now it was that, upon the rocking waters of the ocean, the human face began to appear; the sea appeared paved with innumerable faces, upturned to the heavens: faces imploring, wrathful, despairing, surged upwards by thousands, by myriads, by generations, by centuries:—my agitation was infinite—my mind tossed and surged with the ocean."

I have already spoken of the analogy subsisting between dreaming and insanity, and shall now mention a circumstance which occurs in both states, and points out a very marked similitude of mental condition. The same thing also occasionally, or rather frequently, takes place in drunkenness, which is, to all intents and purposes, a temporary paroxysm of madness. It often happens, for instance, that such objects or persons as we

have seen before and are familiar with, become utterly changed in dreams, and bear not the slightest resemblance to their *real* aspect. It might be thought that such a circumstance would so completely annihilate their identity as to prevent us from believing them to be what, by us, they are conceived; but such is not the case. We never doubt that the particular object or person presented to our eyes appears in its true character. In illustration of this fact, I may mention, that I lately visited the magnificent palace of Versailles in a dream, but that deserted abode of kings stood not before me as when I have gazed upon it broad awake; it was not only magnified beyond even its stupendous dimensions, and its countless splendors immeasurably increased, but the very aspect itself of the mighty pile was changed; and instead of stretching its huge Corinthian front along the entire breadth of an elaborate and richly fantastic garden, adorned to profusion with alcoves, fountains, waterfalls, statues, and terraces, it stood alone in a boundless wilderness—an immense architectural creation of the Gothic ages, with a hundred spires and ten thousand minarets sprouting up, and piercing with their pointed pinnacles the sky. The whole was as different as possible from the reality, but this never once occurred to my mind; and, while gazing upon the visionary fabric, I never doubted for an instant that it then appeared as it had ever done, and was in no degree different from what I had often previously beheld.

Another dream I shall relate in illustration of this point. It was related to me by a young lady, and, independent of its illustrative value, is well worthy of being preserved as a specimen of fine imagination.—"I dreamed," said she, "that I stood alone upon the brink of a dreadful precipice, at the bottom of which rolled a great river. While gazing awe-struck upon the gulph below, some one from behind laid a hand upon my shoulder, and, on looking back, I saw a tall, venerable figure with a long, flowing, silvery beard, and clothed in white garments, whom I at once knew to be the Saviour of the world. 'Do you see,' he inquired, 'the great river that washes the foundation of the rock upon which you now stand? I shall dry it up, so that not a drop of its waters shall remain, and all the fishes that are in it shall perish.' He then waved his hand, and the river was instantly dried up; and I saw the fishes gasping and writhing in the channel, where they all straightway died. 'Now,' said he, 'the river is dried up and the fishes are dead; but to give you a farther testimony of my power, I shall bring back the flood, and every creature that was wont to inhabit it shall live again.' And he waved his hand a second time, and the river was instantly restored, its dry bed filled with volumes of water, and all the dead fishes brought back unto life. On looking round to express to him my astonishment at those extraordinary miracles, and to fall down and worship him, he was gone; and I stood by

myself upon the precipice, gazing with astonishment at the river which rolled a thousand feet beneath me." In this fine vision, the difference between the aspect of Christ as he appeared in it, and as he is represented in the sacred writings, as well as in paintings, did not suggest itself to the mind of the dreamer. He came in the guise of an aged man, which is diametrically opposite to our habitual impressions of his aspect. If it be asked what produces such differences between the reality and the representation, I apprehend we must refer it to some sudden second dream or flash of thought breaking in upon the first, and confusing its character. For instance, I have a dream of an immense Gothic pile, when something about Versailles, somehow, occurs to my mind, and this I immediately associate with the object before me. The lady has the idea of an old man in her dream, and the thought of Christ happening to come across her at the instant, she identifies it involuntarily with the object of her vision. There is yet another explanation of the latter. The old man has the power of working a great miracle; so had Christ, and she is thus led to confound the two together. She, it is true, imagines she knows the old man at once to be the Saviour, without any previous intimation of his miraculous gifts; but this, very possibly, may be a mistake; and the knowledge which she only acquires after witnessing his power, she may, by the confusion attendant on dreams, suppose to have occurred to her in

the first instance. These facts, combined with the dormant state of the reflecting faculties, which do not rectify the erroneous impressions, render the explanation of such dreams sufficiently easy, however puzzling, and unaccountable at first sight.

In some cases, the illusion is not merely confined to sleep, but extends itself to the waking state. To illustrate this I may state the following circumstance:—Some years ago, my impressions concerning the aspect and localities of Inverness, were strangely confused by a dream which I had of that town, taking so strong a hold upon my fancy as to be mistaken for a reality. I had been there before, and was perfectly familiar with the appearance of the town, but this was presented in so different a light, and with so much force by the dream, that I, at last, became unable to say which of the two aspects was the real one. Indeed, the visionary panorama exhibited to my mind, took the strongest hold upon it; and I rather felt inclined to believe that this was the veritable appearance of the town, and that the one which I had actually beheld, was merely the illusion of the dream. This uncertainty continued for several years, till, being again in that quarter, I satisfied myself on the real state of the case. On this occasion, the dream must have occurred to my mind some time after it happened, and taken such a firm hold upon it as to dethrone the reality, and take its place. I remember distinctly of fancying that the little woody hill of Tomnachurich was in

the centre of the town, although it stands at some distance from it; that the principal steeple was on the opposite side of the street to that on which it stands; and that the great mountain of Ben-Wevis, many miles off, was in the immediate neighborhood.

The power of imagination is perhaps never so vividly displayed, as in those dreams which haunt the guilty mind. When any crime of an infamous character has been perpetrated, and when the person is not so utterly hardened as to be insensible of his iniquity, the wide storehouse of retributive vengeance is opened up, and its appalling horrors poured upon him. In vain does he endeavour to expel the dreadful remembrance of his deeds, and bury them in forgetfulness; from the abyss of slumber they start forth, as the vampyres start from their sepulchres, and hover around him like the furies that pursued the footsteps of Orestes; while the voice of conscience stuns his ears with murmurs of judgment and eternity. Such is the punishment reserved for the guilty in sleep. During the busy stir of active existence, they may contrive to evade the memory of their wickedness—to silence the whispers of the "still small voice" within them, and cheat themselves with a semblance of happiness; but when their heads are laid upon the pillow, the flimsy veil which hung between them and crime, melts away like an illusive vapour, and displays the latter in naked and horrid deformity. Then,

in the silence of night, the "still small voice" is heard like an echo from the tomb; then, a crowd of doleful remembrances rush in upon the criminal, no longer to be debarred from visiting the depths of his spirit; and when dreams succeed to such broken and miserable repose, it is only to aggravate his previous horrors, and present them in a character of still more overwhelming dread.*

"Though thy slumber may be deep,
Yet thy spirit shall not sleep;
There are shades which will not vanish,
There are thoughts thou canst not banish;
By a power to thee unknown,
Thou canst never be alone;
Thou art wrapt as with a shroud,
Thou art gathered in a cloud;
And forever shalt thou dwell
In the spirit of this spell."

* "No fiction of romance presents so awful a picture of the ideal tyrant as that of Caligula by Suetonius. His palace — radiant with purple and gold, but murder every where lurking beneath flowers; his smiles and echoing laughter, masking (yet hardly meant to mask) his foul treachery of heart; his hideous and tumultuous dreams; his baffled sleep, and his sleepless nights, compose the picture of an Æschylus. What a master's sketch lies in those few lines: — 'Incitabatur insomnio maxime; neque enim plus tribus horis nocturnis quiescebat; ac ne his placidâ quiete, at pavidâ miris rerum imaginibus: ut qui inter ceteras pelagi quondam speciem colloquentem secum videre visus sit. Ideoque magna parte noctis, vigiliæ cubandique tædio, nunc toro residens, nunc per longissimas porticus vagus, invocare identidem atque expectare lucem consueverat;' — *i. e.* But above all, he was tormented with nervous irritation, by sleeplessness; for he enjoyed not more than three hours of nocturnal repose; nor even these in

Such are the principal phenomena of dreams; and from them it will naturally be deduced, that dreaming may occur under a great variety of circumstances; that it may result from the actual state of the body or mind, previous to falling asleep; or exist as a train of emotions which can be referred to no apparent external cause. The forms it assumes are also as various as the causes giving rise to it, and much more striking in their nature. In dreams, imagination unfolds, most gorgeously, the ample stores of its richly decorated empire; and in proportion to the splendor of that faculty in any individual, are the visions which pass before him in sleep. But even the most dull and passionless, while under the dreaming influence, frequently enjoy a temporary inspiration: their torpid faculties are aroused from the benumbing spell which hung over them in the waking state, and lighted up with the Promethean fire of genius and romance; the prose of their frigid spirits is converted into magnificent poetry; the atmosphere around them peopled with new and unheard-of imagery; and they walk in a region to which the proudest flights

pure, untroubled rest, but agitated by phantasmata of portentous augury; as, for example, upon one occasion he fancied that he saw the sea, under some definite impersonation, conversing with himself. Hence it was, and from this incapacity of sleeping, and from weariness of lying awake, that he had fallen into habits of ranging all the night long through the palace, sometimes throwing himself on a couch, sometimes wandering along the vast corridors —watching for the earliest dawn, and anxiously invoking its approach."—*Blackwood's Magazine*, Vol. XXXIII. p. 59.

of their limited energies could never otherwise have attained.

I shall conclude this chapter with a few words on the management of dreams.

When dreams are of a pleasing character, no one cares any thing about their removal: it is only when they get distressing and threaten to injure the health of the individual, by frequent recurrence, that this becomes an important object. When dreams assume the character of nightmare, they must be managed according to the methods laid down for the cure of that affection. In all cases, the condition of the digestive organs must be attended to, as any disordered state of these parts is apt to induce visions of a very painful character. For this purpose, mild laxatives may become useful; and if the person is subject to heartburn, he should use a little magnesia, chalk, or carbonate of soda, occasionally. Attention, also, must be paid to the diet; and as suppers, with some people, have a tendency to generate dreams of all kinds, these meals should, in such cases, be carefully avoided. At the same time, great care should be taken not to brood over any subject upon lying down, but to dispel, as soon as possible, all intrusive ideas, especially if they are of a painful nature. If there is any unpleasant circumstance, such as hardness, irregularity, &c., connected with the bed, which tends to affect sleep, and thus induce dreams, it must be removed. Late reading, the use of tea or coffee shortly before going to rest, or any thing

which may stimulate the brain, ought likewise to be avoided.

If dreaming seems to arise from any fulness of the system, blooding and low diet will sometimes effect a cure. Mr. Stewart, the celebrated pedestrian traveller, states that he never dreamed when he lived exclusively upon vegetable food. This, however, may not hold true with every one. "When dreams arise from a diminution of customary stimuli, a light supper, a draught of porter, a glass of wine, or a dose of opium, generally prevent them. Habitual noises, when suspended, should be restored."*

In speaking of dreams representative of danger, I may mention that there are instances of persons, who, having determined to remember that the perils seen in them are fallacious, have actually succeeded in doing so, while asleep; and have thus escaped the terrors which those imaginary dangers would otherwise have produced. Haller relates a case of this kind; and Mr. Dugald Stewart mentions that the plan was successfully adopted by Dr. Reid to get rid of the distress of those fearful visions by which he was frequently annoyed. Whenever, in a dream, the Doctor supposed himself on the brink of a precipice, or any other dangerous situation, it was his custom to throw himself over, and thus destroy the illusion. Dr. Beattie also relates, that at one time he found himself in a

* Rush's Medical Inquiries.

dangerous situation upon the parapet of a bridge. Reflecting that he was not subject to pranks of this nature, he began to fancy that it might be a dream, and determined to pitch himself over, with the conviction that this would restore him to his senses, which accordingly took place.* I could never manage to carry this system into effect in an ordinary dream of terror, but I have sometimes succeeded in doing so during an attack of nightmare; and have thus very materially mitigated the alarm produced by that distressing sensation. This intellectual operation may also be successfully employed to dispel the lowness of spirits under which we often awake from unpleasant visions, by teaching us that the depression we experience is merely the result of some unnatural excitement in the brain. Indeed, all kinds of melancholy, not based upon some obvious foundation, might be mitigated or dispelled altogether, could we only oppose our feelings with the weapons of reason, and see things as they really are, and not as they only seem to be.

* These facts do not controvert what is elsewhere stated of a person never being aware, during the actual process of a dream, that he was dreaming. While the above dreams were in progress, the individuals never doubted that they were dreaming: the doubt, and the actions consequent upon it, were after-operations.

CHAPTER IV.

PROPHETIC POWER OF DREAMS.

Dreams have been looked upon by some, as the occasional means of giving us an insight into futurity. This opinion is so singularly unphilosophical, that I would not have noticed it, were it not advocated even by persons of good sense and education. In ancient times, it was so common as to obtain universal belief; and the greatest men placed as implicit faith in it as in any fact of which their own senses afforded them cognizance. That it is wholly erroneous, however, cannot be doubted; and any person who examines the nature of the human mind, and the manner in which it operates in dreams, must be convinced, that under no circumstances, except those of a miracle, in which the ordinary laws of nature are triumphed over, can such an event ever take place. The Sacred Writings testify that miracles were common in former times; but I believe no man of sane mind will contend that they ever occur in the

present state of the world. In judging of things as now constituted, we must discard supernatural influence altogether, and estimate events according to the general laws which the Great Ruler of Nature has appointed for the guidance of the universe. If, in the present day, it were possible to conceive a suspension of these laws, it must, as in former ages, be in reference to some great event, and to serve some mighty purpose connected with the general interests of the human race; but if faith is to be placed in modern miracles, we must suppose that God suspended the above laws for the most trivial and useless of purposes—as, for instance, to intimate to a man that his grandmother will die on a particular day, that a favorite mare has broke her neck, that he has received a present of a brace of game, or that a certain friend will step in and take pot-luck with him on the morrow.

At the same time, there can be no doubt that many circumstances occurring in our dreams have been actually verified; but this must be regarded as altogether the effect of chance; and for one dream which turns out to be true, at least a thousand are false. In fact, it is only when they are of the former description, that we take any notice of them; the latter are looked upon as mere idle vagaries, and speedily forgotten. If a man, for instance, dreams that he has gained a law-suit in which he is engaged, and if this circumstance actually takes place, there is nothing at all extraordinary in the coincidence: his mind was full of

the subject, and, in sleep, naturally resolved itself into that train of ideas in which it was most deeply interested. Or if we have a friend engaged in war, our fears for his safety will lead us to dream of death or captivity, and we may see him pent up in a hostile prison-house, or lying dead upon the battle plain. And should these melancholy catastrophies ensue we call our vision to memory ; and, in the excited state of mind into which we are thrown, are apt to consider it as a prophetic warning, indicative of disaster. The following is a very good illustration of this particular point.

Miss M——, a young lady, a native of Rossshire, was deeply in love with an officer who accompanied Sir John Moore in the Peninsular war. The constant danger to which he was exposed, had an evident effect upon her spirits. She became pale and melancholy in perpetually brooding over his fortunes ; and, in spite of all that reason could do, felt a certain conviction, that when she last parted with her lover, she had parted with him forever. In vain was every scheme tried to dispel from her mind the awful idea ; in vain were all the sights which opulence could command, unfolded before her eyes. In the midst of pomp and gaiety, when music and laughter echoed around her, she walked as a pensive phantom, over whose head some dreadful and mysterious influence hung. She was brought by her affectionate parents to Edinburgh, and introduced into all the gaiety of that metropolis, but nothing could restore her, or

banish from her mind the insupportable load which oppressed it. The song and the dance were tried in vain: they only aggravated her distress, and made the bitterness of despair more poignant. In a surprisingly short period, her graceful form declined into all the appalling characteristics of a fatal illness; and she seemed rapidly hastening to the grave, when a dream confirmed the horrors she had long anticipated, and gave the finishing stroke to her sorrows. One night, after falling asleep, she imagined she saw her lover, pale, bloody, and wounded in the breast, enter her apartment. He drew aside the curtains of the bed, and with a look of the utmost mildness, informed her that he had been slain in battle, desiring her, at the same time, to comfort herself, and not take his death too seriously to heart. It is needless to say what influence this vision had upon a mind so replete with woe. It withered it entirely, and the unfortunate girl died a few days thereafter, but not without desiring her parents to note down the day of the month on which it happened, and see if it would be confirmed, as she confidently declared it would. Her anticipation was correct, for accounts were shortly after received that the young man was slain at the battle of Corunna, which was fought on the very day, on the night of which his mistress had beheld the vision.

This relation, which may be confidently relied upon, is one of the most striking examples of identity between the dream and the real circumstances

with which I am acquainted, but it must be looked upon as merely accidental. The lady's mind was deeply interested in the fate of her lover, and full of that event which she most deeply dreaded—his death. The time of this occurrence, as coinciding with her dream, is certainly curious; but still there is nothing in it which can justify us in referring it to any other origin than chance. The following events, which occurred to myself, in August 1821, are almost equally remarkable, and are imputable to the same fortuitous cause.

I was then in Caithness, when I dreamed that a near relation of my own, residing three hundred miles off, had suddenly died: and immediately thereafter awoke in a state of inconceivable terror, similar to that produced by a paroxysm of nightmare. The same day, happening to be writing home, I mentioned the circumstance in a half-jesting, half-earnest way. To tell the truth, I was afraid to be serious, lest I should be laughed at for putting any faith in dreams. However, in the interval between writing and receiving an answer, I remained in a state of most unpleasant suspense. I felt a presentiment that something dreadful had happened, or would happen; and although I could not help blaming myself for a childish weakness in so feeling, I was unable to get rid of the painful idea which had taken such rooted possession of my mind. Three days after sending away the letter, what was my astonishment when I received one written the day subsequent to mine, and stat-

ing that the relative of whom I had dreamed, had been struck with a fatal shock of palsy the day before—*viz.* the very day on the morning of which I had beheld the appearance in my dream! My friends received my letter two days after sending their own away, and were naturally astonished at the circumstance. I may state that my relation was in perfect health before the fatal event took place. It came upon him like a thunderbolt, at a period when no one could have the slightest anticipation of danger.

The following case will interest the reader, both on its own account, and from the remarkable coincidence between the dream and the succeeding calamity; but, like all other instances of the kind, this also must be referred to chance.

"Being in company the other day, when the conversation turned upon dreams, I related one, which, as it happened to my own father, I can answer for the perfect truth of it. About the year 1731, my father, Mr. D. of K——, in the County of Cumberland, came to Edinburgh to attend the classes, having the advantage of an uncle in the regiment then in the Castle, and remained under the protection of his uncle and aunt, Major and Mrs. Griffiths, during the winter. When spring arrived, Mr. D. and three or four young gentlemen from England, (his intimates,) made parties to visit all the neighboring places about Edinburgh, Roslin, Arthur's Seat, Craig-Millar, &c., &c. Coming home one evening from some of those places,

Mr. D. said, 'We have made a party to go a-fishing to Inch-Keith to-morrow, if the morning is fine, and have bespoke our boat; we shall be off at six;' no objection being made, they separated for the night.

"Mrs. Griffiths, had not been long asleep, till she screamed out in the most violent agitated manner, 'The boat is sinking; save, oh, save them!' The Major awaked her, and said, 'Were you uneasy about the fishing party?' 'Oh no,' said she, 'I had not once thought of it.' She then composed herself, and soon fell asleep again: in about an hour, she cried out in a dreadful fright, 'I see the boat is going down.' The Major again awoke her, and she said, 'It has been owing to the other dream I had; for I feel no uneasiness about it.' After some conversation, they both fell sound asleep, but no rest could be obtained for her; in the most extreme agony, she again screamed, 'They are gone; the boat is sunk!' When the Major awakened her, she said, 'Now I cannot rest; Mr. D. must not go, for I feel, should he go, I would be miserable till his return; the thoughts of it would almost kill me.'

"She instantly arose, threw on her wrapping-gown, went to his bed-side, for his room was next their own, and with great difficulty she got his promise to remain at home. 'But what am I to say to my young friends whom I was to meet at Leith at six o'clock? 'With great truth you may say your aunt is ill, for I am so at present; consider,

you are an only son, under our protection, and should any thing happen to you, it would be my death.' Mr. D. immediately wrote a note to his friends, saying he was prevented from joining them, and sent his servant with it to Leith. The morning came in most beautifully, and continued so till three o'clock, when a violent storm arose, and in an instant the boat, and all that were in it, went to the bottom, and were never heard of, nor was any part of it ever seen."*

Equally singular is the following case, from the "Memoirs of Lady Fanshawe."

"My mother being sick to death of a fever, three months after I was born, which was the occasion she gave me suck no longer, her friends and servants thought to all outward appearance she was dead, and so lay almost two days and a night; but Dr. Winston coming to comfort my father, went into my mother's room, and looking earnestly on her face, said, 'She was so handsome, and now looks so lovely, I cannot think she is dead;' and suddenly took a lancet out of his pocket, and with it cut the sole of her foot, which bled. Upon this, he immediately caused her to be laid upon the bed again, and to be rubbed, and such means, as she came to life, and opening her eyes, saw two of her kinswomen stand by her, my Lady Knollys and my Lady Russell, both with great wide sleeves, as the fashion then was, and said, 'Did not you

* "Blackwood's Edinburgh Magazine," vol. xix. p. 73.

promise me fifteen years, and are you come again?' which they not understanding, persuaded her to keep her spirits quiet in that great weakness wherein she then was; but some hours after, she desired my father and Dr. Howlsworth might be left alone with her, to whom she said, 'I will acquaint you, that during the time of my trance I was in great quiet, but in a place I could neither distinguish nor describe; but the sense of leaving my girl, who is dearer to me than all my children, remained a trouble upon my spirits. Suddenly I saw two by me, clothed in long white garments, and methought I fell down upon my face upon the dust; and they asked why I was so troubled in so great happiness. I replied, O let me have the same grant given to Hezekiah, that I may live fifteen years to see my daughter a woman: to which they answered, It is done: and then, at that instant, I awoke out of my trance!' and Dr. Howlsworth did there affirm, that that day she died made just fifteen years from that time."

A sufficiently striking instance of such coincidence occurs in the case of Dr. Donne, the metaphysical poet; but I believe that, in this case, it was a spectral illusion rather than a common dream. Two days after he had arrived in Paris, he was left alone in a room where he had been dining with Sir Robert Drury and a few companions. "Sir Robert returned about an hour afterwards. He found his friend in a state of ecstacy, and so altered in his countenance, that he could

not look upon him without amazement. The Doctor was not able for some time to answer the question, *what had befallen him?*—but after a long and perplexed pause, at last said, 'I have seen a dreadful vision since I saw you; I have seen my dear wife pass twice by me through this room, with her hair hanging about her shoulders, and a dead child in her arms. This I have seen since I saw you.' To which Sir Robert answered, 'Sure, Sir, you have slept since I went out; and this is the result of some melancholy dream, which I desire you to forget, for you are now awake.' Donne replied, 'I cannot be more sure that I now live, than that I have not slept since I saw you; and am as sure that at her second appearing she stopped, looked me in the face and vanished.'"* It is certainly very curious that Mrs. Donne, who was then in England, was at this time sick in bed, and had been delivered of a dead child, on the same day, and about the same hour, that the vision occurred. There were distressing circumstances in the marriage of Dr. Donne which account for his mind being strongly impressed with the image of his wife, to whom he was exceedingly attached; but these do not render the coincidence above related less remarkable.

I do not doubt that the apparition of Julius Cæsar, which appeared to Brutus, and declared it would meet him at Philippi, was either a dream

* Hibbert's Philosophy of Apparitions, p. 354.

or a spectral illusion—probably the latter. Brutus, in all likelihood, had some idea that the battle which was to decide his fate would be fought at Philippi: probably it was a good military position, which he had fixed upon as a fit place to make a final stand; and he had done enough to Cæsar to account for his own mind being painfully and constantly engrossed with the image of the assassinated Dictator. Hence the verification of this supposed warning—hence the easy explanation of a supposed supernatural event.

At Newark-upon-Trent, a curious custom, founded upon the preservation of Alderman Clay and his family by a dream, has prevailed since the days of Cromwell. On the 11th March, every year, penny loaves are given away to any one who chooses to appear at the town hall and apply for them, in commemoration of the alderman's deliverance, during the siege of Newark by the parliamentary forces. This gentleman, by will, dated 11th December, 1694, gave to the mayor and aldermen one hundred pounds, the interest of which was to be given to the vicar yearly, on condition of his preaching an annual sermon. Another hundred pounds were also appropriated for the behoof of the poor, in the way above mentioned. The origin of this bequest is singular. During the bombardment of Newark by Oliver Cromwell's forces, the alderman dreamed three nights successively that his house had taken fire, which produced such a vivid impression upon his

mind, that he and his family left it; and in a few days the circumstances of his vision actually took place, by the house being burned down by the besiegers.

Dr. Abercrombie relates the case of a gentleman in Edinburgh, who was affected with an aneurism of the popliteal artery, for which he was under the care of two eminent surgeons. About two days before the time appointed for the operation, his wife dreamed that a change had taken place in the disease, in consequence of which an operation would not be required. "On examining the tumor in the morning, the gentleman was astonished to find that the pulsation had entirely ceased; and, in short, this turned out to be a spontaneous cure. To persons not professional, it may be right to mention that the cure of popliteal aneurism, without an operation, is a very uncommon occurrence, not happening, perhaps, in one out of numerous instances, and never to be looked upon as probable in any individual case. It is likely, however, that the lady had heard of the possibility of such a termination, and that her anxiety had very naturally embodied this into a dream: the fulfilment of it, at the very time when the event took place, is certainly a very remarkable coincidence."*

Persons are said to have had the period of their

* Abercrombie's Inquiries concerning the Intellectual Powers, p. 282, 1st edit.

own death pointed out to them in dreams. I have often heard the case of the late Mr. M. of D—— related in support of this statement. It is certainly worth telling, not on account of any supernatural character belonging to it, but simply from the extraordinary coincidence between the dream and the subsequent event. This gentleman dreamed one night that he was out riding, when he stopped at an inn on the road side for refreshment, where he saw several people whom he had known some years before, but who were all dead. He was received kindly by them, and desired to sit down and drink, which he accordingly did. On quitting this strange company, they exacted a promise from him that he would visit them that day six weeks. This he promised faithfully to do; and, bidding them farewell, he rode homewards. Such was the substance of his dream, which he related in a jocular way to his friends, but thought no more about it, for he was a person above all kind of superstition. The event, however, was certainly curious enough, as well as melancholy; for on that very day six weeks on which he had engaged to meet his friends at the inn, he was killed in attempting to spring his horse over a five-barred gate. The famous case of Lord Lyttleton* is also

* "Of late it has been said and published, that the unfortunate nobleman had previously determined to take poison, and of course, had it in his own power to ascertain the execution of the prediction It was, no doubt, singular that a man, who meditated his exit from the world, should have chosen to play such a trick upon his friends.

cited as an example of a similar kind, but with less show of reason, for this case is now very generally supposed to be an imposition; and so will almost every other of the same kind, if narrowly investigated. At the same time, I do not mean to doubt that such an event, foretold in a dream, may occasionally come to pass; but I would refer the whole to fortuitous coincidence. Men dream, every now and then, that they will die on a certain day, yet how seldom do we see those predictions fulfilled by the result! In very delicate people, indeed, such a visionary communication, by acting fatally upon the mind, might be the means of occasioning its own fulfilment. In such cases, it has been customary for the friends of the individual to put back the clock an hour or two, so as to let the fatal period pass by without his being aware of it; and as soon as it was fairly passed, to inform him of the circumstance, and laugh him out of his apprehension.

There is another way in which the apparent fulfilment of a dream may be brought about. A good illustration in point is given by Mr. Combe. The subject of it was one Scott, executed in 1823, at Jedburg, for murder. "It is stated in his life, that, some years before the fatal event, he had dreamed that he had committed a murder, and

But it is still more credible that a whimsical man should do so wild a thing, than that a messenger should be sent from the dead, to tell a libertine at what precise hour he should expire." *Scott's Letters on Demonology, p.* 361.

was greatly impressed with the idea. He frequently spoke of it, and recurred to it as something ominous, till at last it was realized. The organ of *Destructiveness* was large in his head, and so active that he was an enthusiast in poaching, and prone to outrage and violence in his habitual conduct. This activity of the organ might take place during sleep, and then it would inspire his mind with destructive feelings, and the dream of murder would be the consequence. From the great natural strength of the propensity, he probably may have felt, when awake, an inward tendency to this crime; and, joining this and the dream together, we can easily account for the strong impression left by the latter on his mind."*

One method in which death may appear to be foretold is, by the accession of frightful visions immediately before the fatal illnesses. This, however, goes for nothing in the way of argument, for it was the state of the system shortly before the attack of disease which induced such dreams. According to Silimachus, the epidemic fever which prevailed at Rome was ushered in by attacks of nightmare; and Sylvius Deleboe, who describes the epidemic which raged at Leyden in 1669, states, that previous to each paroxysm of the fever, the patient fell asleep, and suffered a severe attack of nightmare. The vulgar belief, therefore, that unpleasant dreams are ominous of death, is not

* Combe's System of Phrenology, p. 511, 3d edit.

destitute of foundation; but the cause why they should be so is perfectly natural. It is the incipient disease which produces the dreams, and the fatal event which often follows, is a natural consequence of that disease.

It is undoubtedly owing to the faculty possessed by sleep, of renewing long-forgotten ideas, that persons have had important facts communicated to them in dreams. There have been instances, for example, where valuable documents, sums of money, &c., have been concealed, and where either the person who secreted them, or he who had the place of their concealment communicated to him, may have forgotten every thing therewith connected. He may then torture his mind in vain, during the waking state, to recollect the event; and it may be brought to his remembrance, at once, in a dream. In such cases, an apparition is generally the medium through which the seemingly mysterious knowledge is communicated. The imagination conjures up some phantom that discloses the secret; which circumstance, proceeding, in reality, from a simple operation of the mind, is straightway converted into something supernatural, and invested with all the attributes of wonder and awe. When such spectral forms appear, and communicate some fact which turns out to be founded on truth, the person is not always aware that the whole occurred in a dream, but often fancies that he was broad awake when the apparition appeared to him and communicated the

particular intelligence. When we hear, therefore, of hidden treasures, wills, &c., being disclosed in such a manner, we are not always to scout the report as false. The spectre divulging the intelligence was certainly the mere chimera of the dreamer's brain, but the facts revealed, apparently by this phantom, may, from the above circumstance, be substantially true. The following curious case is strikingly in point, and is given by Sir Walter Scott in his notes to the new edition of "The Antiquary."

"Mr. R——d of Bowland, a gentleman of landed property in the Vale of Gala, was prosecuted for a very considerable sum, the accumulated arrears of tiend, (or tithe,) for which he was said to be indebted to a noble family, the titulars (lay impropriators of the tithes.) Mr. R——d was strongly impressed with the belief that his father had, by a form of process peculiar to the law of Scotland, purchased these lands from the titular, and, therefore, that the present prosecution was groundless. But after an industrious search among his father's papers, an investigation of the public records, and a careful inquiry among all persons who had transacted law business for his father, no evidence could be recovered to support his defence. The period was now near at hand when he conceived the loss of his lawsuit to be inevitable, and he had formed the determination to ride to Edinburgh next day, and make the best bargain he could in the way of compromise. He

went to bed with this resolution, and, with all the circumstances of the case floating upon his mind, had a dream to the following purpose. His father, who had been many years dead, appeared to him, he thought, and asked him why he was disturbed in his mind. In dreams, men are not surprised at such apparitions. Mr. R——d thought that he informed his father of the cause of his distress, adding, that the payment of a considerable sum of money was the more unpleasant to him, because he had a strong consciousness that it was not due, though he was unable to recover any evidence in support of his belief. 'You are right, my son,' replied the paternal shade; 'I did acquire right to these tiends, for payment of which you are now prosecuted. The papers relating to the transaction are in the hands of Mr. ———, a writer, (or attorney,) who is now retired from professional business, and resides at Inveresk, near Edinburgh. He was a person whom I employed on that occasion for a particular reason, but who never on any other occasion transacted business on my account. It is very possible,' pursued the vision, 'that Mr. ——— may have forgotten a matter which is now of a very old date; but you may call it to his recollection by this token, that when I came to pay his account, there was difficulty in getting change for a Portugal piece of gold, and we were forced to drink out the balance at a tavern.'

"Mr. R——d awoke in the morning with all the words of the vision imprinted on his mind, and

thought it worth while to walk across the country to Iveresk, instead of going straight to Edinburgh. When he came there, he waited on the gentleman mentioned in the dream, a very old man. Without saying anything of the vision, he inquired whether he remembered having conducted such a matter for his diseased father. The old gentleman could not at first bring the circumstance to his recollection, but on mention of the Portugal piece of gold, the whole returned upon his memory; he made an immediate search for the papers, and recovered them—so that Mr. R——d carried to Edinburgh the documents necessary to gain the cause which he was on the verge of losing.

"The author has often heard this story told by persons who had the best access to know the facts, who were not likely themselves to be deceived, and were certainly incapable of deception. He cannot, therefore, refuse to give it credit, however extraordinary the circumstances may appear. The circumstantial character of the information given in the dream, takes it out of the general class of impressions of the kind, which are occasioned by the fortuitous coincidence of actual events with our sleeping thoughts. On the other hand, few will suppose that the laws of nature were suspended, and a special communication from the dead to the living permitted, for the purpose of saving Mr. R——d a certain number of hundred pounds. The author's theory is, that the dream was only the recapitulation of information which Mr. R——d

had really received from his father while in life, but which at first he merely recalled as a general impression that the claim was settled. It is not uncommon for persons to recover, during sleep, the thread of ideas which they have lost during their waking hours. It may be added, that this remarkable circumstance was attended with bad consequences to Mr. R——d; whose health and spirits were afterwards impaired, by the attention which he thought himself obliged to pay to the visions of the night." This result is a melancholy proof of the effect sometimes produced by ignorance of natural laws. Had Mr. R——d been acquainted with the nature of the brain, and of the manner in which it is affected in sleep, the circumstance above related would have given him no annoyance. He would have traced the whole chain of events to their true source; but, being ignorant of this, he became the victim of superstition, and his life was rendered miserable.

CHAPTER V.

NIGHTMARE.

Nightmare may be defined a painful dream, accompanied with difficult respiratory action, and a torpor in the powers of volition. The reflecting organs are generally more or less awake; and, in this respect, nightmare differs from simple dreaming, where they are mostly quiescent.

This affection, the Ephialtes of the Greeks, and Incubus of the Romans, is one of the most distressing to which human nature is subject. Imagination cannot conceive the horrors it frequently gives rise to, or language describe them in adequate terms. They are a thousand times more frightful than the visions conjured up by necromancy or *diablere;* and far transcend every thing in history or romance, from the fable of the writhing and asp-encircled Laocoon to Dante's appalling picture of Ugolino and his famished offspring, or the hidden tortures of the Spanish Inquisition. The whole mind, during the paroxysm, is wrought up to a pitch of unutterable despair: a spell is laid upon the faculties, which freezes them into inac-

tion; and the wretched victim feels as if pent alive in his coffin, or overpowered by resistless and immitigable pressure.

The modifications which nightmare assumes are infinite; but one passion is almost never absent—that of utter and incomprehensible dread. Sometimes the sufferer is buried beneath overwhelming rocks, which crush him on all sides, but still leave him with a miserable consciousness of his situation. Sometimes he is involved in the coils of a horrid, slimy monster, whose eyes have the phosphorescent glare of the sepulchre, and whose breath is poisonous as the marsh of Lerna. Every thing horrible, disgusting, or terrific in the physical or moral world, is brought before him in fearful array; he is hissed at by serpents, tortured by demons, stunned by the hollow voices and cold touch of apparitions. A mighty stone is laid upon his breast, and crushes him to the ground in helpless agony: mad bulls and tigers pursue his palsied footsteps: the unearthly shrieks and gibberish of hags, witches, and fiends float around him. In whatever situation he may be placed, he feels superlatively wretched: he is Ixion working for ages at his wheel: he is Sisyphus rolling his eternal stone: he is stretched upon the iron bed of Procrustes: he is prostrated by inevitable destiny beneath the approaching wheels of the car of Juggernaut. At one moment, he may have the consciousness of a malignant demon being at his side: then to shun the sight of so appalling an

object, he will close his eyes, but still the fearful being makes its presence known; for its icy breath is felt diffusing itself over his visage, and he knows that he is face to face with a fiend. Then, if he look up, he beholds horrid eyes glaring upon him, and an aspect of hell grinning at him with even more than hellish malice. Or, he may have the idea of a monstrous hag squatted upon his breast—mute, motionless, and malignant; an incarnation of the Evil Spirit—whose intolerable weight crushes the breath out of his body, and whose fixed, deadly, incessant stare petrifies him with horror and makes his very existence insufferable.

In every instance, there is a sense of oppression and helplessness; and the extent to which these are carried, varies according to the violence of the paroxysm. The individual never feels himself a free agent; on the contrary he is spell-bound by some enchantment, and remains an unresisting victim for malice to work its will upon. He can neither breathe, nor walk, nor run, with his wonted facility. If pursued by any imminent danger, he can hardly drag one limb after another; if engaged in combat, his blows are utterly ineffective; if involved in the fangs of any animal, or in the grasp of an enemy, extrication is impossible. He struggles, he pants, he toils, but it is all in vain: his muscles are rebels to the will, and refuse to obey its calls. In no case is there a sense of complete freedom: the benumbing

stupor never departs from him; and his whole being is locked up in one mighty spasm. Sometimes he is forcing himself through an aperture too small for the reception of his body, and is there arrested and tortured by the pangs of suffocation produced by the pressure to which he is exposed; or he loses his way in a narrow labyrinth, and gets involved in its contracted and inextricable mazes; or he is entombed alive in a sepulchre, beside the mouldering dead. There is, in most cases, an intense reality in all that he sees, or hears, or feels. The aspects of the hideous phantoms which harass his imagination are bold and defined; the sounds which greet his ear appallingly distinct; and when any dimness or confusion of imagery does prevail, it is of the most fearful kind, leaving nothing but dreary and miserable impressions behind it.

Much of the horror experienced in nightmare will depend upon the natural activity of the imagination, upon the condition of the body, and upon the state of mental exertion before going to sleep. If, for instance, we have been engaged in the perusal of such works as "The Monk," "The Mysteries of Udolpho," or "Satan's Invisible World Discovered;" and if an attack of nightmare should supervene, it will be aggravated into sevenfold horror by the spectral phantoms with which our minds have been thereby filled. We will enter into all the fearful mysteries of these writings, which, instead of being mitigated by slumber, acquire an

intensity which they never could have possessed in the waking state. The apparitions of murdered victims, like the form of Banquo, which wrung the guilty conscience of Macbeth, will stalk before us; we are surrounded by sheeted ghosts, which glare upon us with their cold sepulchral eyes; our habitation is among the vaults of ancient cathedrals, or among the dungeons of ruined monasteries, and our companions are the dead.

At other times, an association of ludicrous images passes through the mind: every thing becomes incongruous ridiculous, and absurd. But even in the midst of such preposterous fancies, the passion of mirth is never for one moment excited: the same blank despair, the same freezing *inertia*, the same stifling tortures, still harass us; and so far from being amused by the laughable drama enacting before us, we behold it with sensations of undefined horror and disgust.

In general, during an attack, the person has the consciousness of an utter inability to express his horror by cries. He feels that his voice is half choked by impending suffocation, and that any exertion of it, farther than a deep sigh or groan, is impossible. Sometimes, however, he conceives that he is bellowing with prodigious energy, and wonders that the household are not alarmed by his noise. But this is an illusion: those outcries which he fancies himself uttering, are merely obscure moans, forced with difficulty and pain from the stifled penetralia of his bosom.

Nightmare takes place under various circumstances. Sometimes, from a state of perfect sleep, we glide into it, and feel ourselves unconciously overtaken by its attendant horrors: at other times, we experience it stealing upon us like a thief, at a period when we are all but awake, and aware of its approach. We have then our senses about us, only, perhaps a little deadened and confused by incipient slumber; and we feel the gradual advance of the fiend, without arousing ourselves, and scaring him away, although we appear to possess the full ability of doing so. Some persons, immediately previous to an attack, have sensations of vertigo and ringing in the ears.

At one time, nightmare melts into unbroken sleep or pleasing dreams; and we awake in the morning with merely the remembrance of having had one of its attacks; at another, it arouses us by its violence, and we start out of it with a convulsive shudder. At the moment of throwing off the fit, we seem to turn round upon the side with a mighty effort, as if from beneath the pressure of a superincumbent weight; and, the more thoroughly to awake ourselves, we generally kick violently, beat the breast, rise up in bed, and cry out once or twice. As soon as we are able to exercise the voice or voluntary muscles with freedom, the paroxysm is at an end; but for some time after, we experience extreme terror, and often cold shivering, while the heart throbs violently, and the respiration is hurried. These two latter circumstan-

ces are doubted by Dr. Darwin, but I am convinced of their existence, both from what I have experienced in my own person, and from what I have been told by others: indeed, anology would irresistibly lead us to conclude that they must exist; and whoever carefully investigates the subject, will find that they do almost universally.

An opinion prevails, that during incubus the person is always upon his back; and the circumstance of his usually feeling as if in that posture, together with the relief which he experiences on turning round upon his side, are certainly strong presumptions in favor of its accuracy. The sensations, however, which occur, in this state, are fallacious in the highest degree. We have seldom any evidence either that he was on his back, or that he turned round at all. The fact, that he supposed himself in the above position during the fit, and the other fact, that, on recovering from it, he was lying on his side, may have produced the illusion; and, where he never moved a single muscle, he may conceive that he turned round after a prodigious effort. I have had an attack of this disorder while sitting in an arm-chair, or with my head leaning against a table. In fact, these are the most likely positions to bring it on, the lungs being then more completely compressed than in almost any other posture. I have also had it most distinctly while lying on the side, and I know many cases of a similar description in others. Although, therefore, nightmare may take place more frequently

upon the back than upon the side, the opinion that it occurs only in the former of these postures, is altogether incorrect; and where we are much addicted to its attacks, no posture whatever will protect us.

Persons not particularly subject to incubus, feel no inconvenience, save temporary terror or fatigue, from any occasional attack which they may have; but those with whom it is habitual, are apt to experience a certain degree of giddiness, ringing in the ears, tension of the forehead, flashing of light before the eyes, and other symptoms of cerebral congestion. A bad taste in the mouth, and more or less fulness about the pit of the stomach, are sometimes experienced after an attack.

The illusions which occur, are perhaps the most extraordinary phenomena of nightmare; and so strongly are they often impressed upon the mind, that, even on awaking, we find it impossible not to believe them real. We may, for example, be sensible of knockings at the door of our apartment, hear familiar voices calling upon us, and see individuals passing through the chamber. In many cases, no arguments, no efforts of the understanding will convince us that these are merely the chimeras of sleep. We regard them as events of actual occurrence, and will not be persuaded to the contrary. With some, such a belief has gone down to the grave: and others have maintained it strenuously for years, till a recurrence of the illusions, under circumstances which rendered

their real existence impossible, has shown them that the whole was a dream. Many a good ghost story has had its source in the illusions of nightmare.

The following case related by Mr. Waller, gives a good idea of the strength of such illusive feelings.

"In the month of February, 1814, I was living in the same house with a young gentleman, the son of a peer of the United Kingdom, who was at that time under my care, in a very alarming state of health; and who had been, for several days, in a state of violent delirium. The close attention which his case required from me, together with a degree of personal attachment to him, had rendered me extremely anxious about him; and as my usual hours of sleep suffered a great degree of interruption from the attendance given to him, I was, from that cause alone, rendered more than usually liable to the attacks of nightmare, which consequently intruded itself every night upon my slumbers. The young gentleman in question, from the violence of his delirium, was with great difficulty kept in bed; and had once or twice eluded the vigilance of his attendants, and jumped out of bed; an accident of which I was every moment dreading a repetition. I awoke from my sleep one morning about four o'clock—at least it appeared to me that I awoke—and heard distinctly the voice of this young gentleman, who seemed to be coming hastily up the stairs leading to my apartment, call-

ing me by name, in the manner he was accustomed to do in his delirium; and immediately after, I saw him standing by my bedside, holding the curtains open, expressing all that wildness in his looks which accompanies violent delirium. At the same moment, I heard the voices of his two attendants coming up the stairs in search of him, who likewise came into the room and took him away. During all this scene I was attempting to speak, but could not articulate; I thought, however, that I succeeded in attempting to get out of bed, and assisting his attendants in removing him out of the room; after which, I returned to bed, and instantly fell asleep. When I waited upon my patient in the morning, I was not a little surprised to find that he was asleep; and was utterly confounded on being told that he had been so all night; and as this was the first sleep he had enjoyed for three or four days, the attendants were very minute in detailing the whole particulars of it. Although this account appeared inconsistent with what I conceived I had seen, and with what I concluded they knew as well as myself, I did not, for some time, perceive the error into which I had been led, till I observed that some of my questions and remarks were not intelligible; then I began to suspect the true source of the error, which I should never have discovered had not experience rendered these hallucinations familiar to me. But the whole of this transaction had so much consistency and probability in it, that I might, under different circumstances, have

remained forever ignorant of having been imposed upon in this instance, by my senses."*

During nightmare, the deepness of the slumber varies much at different times. Sometimes we are in a state closely approximating upon perfect sleep; at other times we are almost completely awake; and it will be remarked, that the more awake we are, the greater is the violence of the paroxysm. I have experienced the affection stealing upon me while in perfect possession of my faculties, and have undergone the greatest tortures, being haunted by spectres, hags, and every sort of phantom — having, at the same time, a full consciousness that I was laboring under incubus, and that all the terrifying objects around me were the creations of my own brain. This shows that the judgment is often only very partially affected, and proves also that nightmare is not merely a disagreeable dream, but a painful bodily affection. Were it nothing more than the former, we could rarely possess a knowledge of our condition; for, in simple visions, the reflecting organs are almost uniformly quiescent, and we scarcely ever, for a moment, doubt the reality of our impressions. In nightmare, this is often, perhaps generally, the case; but we frequently meet with instances, in which, during the worst periods of the fit, consciousness remains almost unimpaired.

There are great differences in the duration of the paroxysm, and also in the facility with which

* Waller's Treatise.

it is broken. I know not of any method by which the period to which it extends can be estimated, for the sufferer has no data to go by, and time, as in all modifications of dreaming, is subjected to the most capricious laws—an actual minute often appearing to embrace a whole hour. Of this point, therefore, we must be contented to remain in ignorance; but it may be conceived that the attack will be as various in its duration, as in the characters which it assumes—in one case being ten times as long as in another. With regard to the breaking of the fit, the differences are equally great. At one time, the slightest agitation of the body, the opening of the chamber door, or calling softly to the sufferer, will arouse him; at another, he requires to be shaken violently, and called upon long and loudly, before he is released.

Some people are much more prone to incubus than others. Those whose digestion is healthy, whose minds are at ease, and who go supperless to bed, will seldom be troubled with it. Those, again, who keep late hours, study hard, eat heavy suppers, and are subject to bile, acid, or hypochondria, are almost sure to be more or less its victims. There are particular kinds of food, which pretty constantly lead to the same result, such as cheese, cucumbers, almonds, and whatever is hard to be digested. Hildesheim, in his "De Affectibus Capitis," justly remarks, that "he who wishes to know what nightmare is, let him eat chestnuts

before going to sleep, and drink feculent wine after them."

Certain diseases, also, are apt to induce it, such as asthma, hydrothorax, angina pectoris, and other varieties of dyspnœa. Men are more subject to it than women, probably from their stomachs being more frequently disordered by intemperance, and their minds more closely occupied. Sailors, owing to the hard and indigestible nature of their food, are very frequently its victims; and it is a general remark that it oftener occurs at sea than on shore. It seems probable that much of the superstitious belief of these men, in apparitions, proceeds from the phantoms which nightmare calls into existence. Unmarried women are more annoyed by it than those who are married; and the latter, when pregnant, have it oftener than at other times. Persons who were extremely subject to the complaint in their youth, sometimes get rid of it when they reach the age of puberty, owing, probably, to some change in the constitution which occurs at this period.

There have been different opinions with regard to the proximate cause of incubus, and authors have generally looked upon it as involved in considerable obscurity. An impeded circulation of blood in the pulmonary arteries, compression of the diaphragm by a full stomach, and torpor of the intercostal muscles, are all mentioned as contributing wholly, or partially, to the event. I am of opinion that either of these states may cause night-

mare, but that, in most cases, they are all combined. Any thing, in fact, which impedes respiration, may give rise to the disorder, whether it be asthma, hydrothorax, distended stomach, muscular torpor, or external compression. The causes, then, are various, but it will be found that, whatever they may be, their ultimate operation is upon the lungs.

We have already seen that, in ordinary sleep, particular states of the body are apt to induce visions: it is, therefore, easily conceivable that a sense of suffocation, such as occurs in nightmare, may give birth to all the horrid phantoms seen in that distemper. The physical suffering in such a case, exalts the imagination to its utmost pitch: fills it with spectres and chimeras; and plants an immovable weight or malignant fiend upon the bosom to crush us into agony. Let us see how such physical suffering is brought about.

Any disordered state of the stomach may produce it. First.—This organ may be so distended with food or wind as to press upon the diaphragm, lessen the dimensions of the chest, obstruct the movements of the heart, and thereby impede respiration. Circumstances like these alone are sufficient to produce nightmare; and the cause from the first is purely mechanical.

Secondly.—The state of the stomach may call forth incubus by means more circuitous or indirect. In this case, the viscus is unequal to the task imposed upon it of digesting the food, either from

an unusual quantity being thrown upon it, from the food being of an indigestible nature, or from actual weakness. Here the sensorial power latent in this organ, is insufficient to carry it through with its operations, and it is obliged to draw upon the rest of the body—upon the brain, the respiratory muscles, &c., for the supply of which it is deficient. The muscles of respiration, in giving their portion, reduce themselves to a state of temporary debility, and do not retain a sufficient share to execute their own actions with due vigor. The pectorals, the intercostals, and the diaphragm become thus paralyzed; and, the chest not being sufficiently dilated for perfect breathing, a feeling of suffocation inevitably ensues. In like manner, the muscles of volition, rendered inert by the subtraction of their quota of sensorial power, are unable to exercise their functions, and remain, during the paroxysm, in a state of immovable torpor. This unequal distribution of nervous energy continues till, by producing some excessive uneasiness, it stimulates the will to a violent effort, and breaks the fit; and so soon as this takes place, the balance becomes redressed, and the sensorial equilibrium restored.

Physical suffering of that kind which impedes breathing, may also be occasioned by many other causes—by pneumonia, by empyema, by aneurism of the aorta, by laryngitis, by croup, by external pressure; and, accordingly, either of these may give rise to nightmare. If we chance to lie down

with a pillow or heavy cloak upon the breast, or to sleep with the body bent forward, and the head supported upon a table, as already mentioned, we may be seized with it; and, in truth, whatever, either directly or indirectly, acts upon the respiratory muscles, and impedes their operation, is pretty sure to bring it on. Even a weak or disordered stomach, in which there is no food, by attracting to itself a portion of their sensorial power to aid its own inadequacies, may induce it. The disorder, therefore, takes place under various circumstances —either by direct pressure upon the lungs, as in distended stomach, or hydrothorax; or by partial torpor of the stomach or muscles of respiration, owing to a deficiency of nervous energy. These physical impediments coexisting with, or giving rise to a distempered state of the brain, sufficiently account for the horrors of nightmare.

Why are hard students, deep thinkers, and hypochondriacs unusually subject to incubus? The cause is obvious. Such individuals have often a bad digestion: their stomachs are subject to acidity, and other functional derangements, and therefore, peculiarly apt to generate the complaint. The sedentary life, and habits of intellectual or melancholy reflection in which they indulge, have a tendency not merely to disturb the digestive apparatus, but to act upon the whole cerebral system: hence, they are far more liable to dreams of every kind than other people, in so far as their minds are more intently employed; and when, in sleep, they

are pained by any physical endurance, the activity of their mental powers will naturally associate the most horrible ideas with such suffering, and produce incubus, and all its frightful accompaniments.

Nightmare is sometimes attended with danger, when it becomes habitual. It may then give rise to apoplexy, and destroy life; or, in very nervous subjects, may occasion epileptic and hysterical affections, which prove extremely harassing. According to Cœlius Aurelianus, many people die of this complaint. Probably some of those who are found dead in bed have lost their lives in a fit of incubus, the circumstance being imputed to some other cause. Nightmare is thus, in some cases dangerous: and in all, when it becomes habitual, is such a source of misery, that sleep, instead of being courted as a period of blissful repose, is looked upon with horror, as the appointed season of inexpressible suffering and dread. It becomes, on this account, a matter of importance to contrive some method for preventing the attacks of so distressful a malady. The cause, whatever it may be, must, if practicable, be removed, and the symptoms thence arising will naturally disappear. If the disorder proceed from heavy suppers, or indigestible food, these things ought to be given up, and the person should either go supperless to bed, or with such a light meal as will not hurt his digestion. Salted provisions of all kinds must be abandoned, nor should he taste any thing which will lie heavily upon the stomach, or run into fermentation. For

this reason, nuts, cucumbers, cheese, ham, and fruits are all prejudicial. If he be subject to heart-burn, flatulence, and other dyspeptic symptoms, he should make use of occasional doses of magnesia, or carbonate of potash or soda. I have known a tea-spoonful of either of the two latter, or three times that quantity of the former, taken before stepping into bed, prevent an attack, where, from the previous state of the stomach, I am convinced it would have taken place, had those medicines not been used. Great attention must be paid to the state of the bowels. For this purpose, the colocynth, the compound rhubarb, or the common aloetic pill, should be made use of, in doses of one, two, or three, according to circumstances, till the digestive organs are brought into proper play. The common blue pill, used with proper caution, is also an excellent medicine. In all cases, the patient should take abundant exercise, shun late hours, or too much study, and keep his mind in as cheerful a state as possible. The bed he lies on ought to be hard, and the pillow not very high. When the attacks are frequent, and extremely severe, Dr. Darwin recommends that an alarm clock might be hung up in the room, so that the repose may be interrupted at short intervals. It is a good plan to have another person to sleep in the same bed, who might arouse him from the paroxysm; and he should be directed to lie as little as possible upon the back.

These points comprehend the principal treat-

ment, and when persevered in, will rarely fail to mitigate or remove the disease. Sometimes, however, owing to certain peculiarities of constitution, it may be necessary to adopt a different plan, or combine other means along with the above: thus, Whytt, who was subject to nightmare, could only insure himself against an attack, by taking a small glassful of brandy, just before going to bed; and some individuals find that a light supper prevents the fit, while it is sure to occur if no supper at all be taken. But these are rare exceptions to the general rule, and, when they do occur, must be treated in that manner which experience proves most effectual, without being bound too nicely by the ordinary modes of cure. Blood-letting, which some writers recommend, is useless or hurtful, except in cases where there is reason to suppose that the affection is brought on by plethora. With regard to the other causes of nightmare, such as asthma, hydrothorax, &c., these must be treated on general principles, and it, as one of their symptoms, will depart so soon as they are removed.

Some persons recommend opium for the cure of nightmare, but this medicine I should think more likely to aggravate than relieve the complaint. The late Dr. Polydori, author of "The Vampyre," and of an "Essay on Positive Pleasure," was much subject to incubus, and in the habit of using opium for its removal. One morning he was found dead, and on a table beside him stood a glass,

which had evidently contained laudanum and water. From this, it was supposed he had killed himself by his own treatment; but whether the quantity of laudanum taken by him would have destroyed life in ordinary circumstances, has never been ascertained.

CHAPTER VI.

DAYMARE.

I HAVE strong doubts as to the propriety of considering this affection in any way different from the incubus, or nightmare. It seems merely a modification of the latter, only accompanied by no aberration of the judgment. The person endures precisely many of the same feelings, such as difficult respiration, torpor of the voluntary muscles, deep sighing, extreme terror, and inability to speak. The only difference which seems to exist between the two states is, that, in daymare, the reason is *always* unclouded—whereas in incubus it is *generally* more or less disturbed.

Dr. Mason Good, in his "Study of Medicine," takes notice of a case, recorded by Forestus, "that returned periodically every third day, like an intermittent fever. The patient was a girl, nine years of age, and at these times was suddenly attacked with great terror, a constriction of both the lower and upper belly, with urgent difficulty of breathing. Her eyes continued open, and were permanently continued to one spot; with her hands she

forcibly grasped hold of things, that she might breathe the more easily. When spoken to, she returned no answer. In the meantime, the mind seemed to be collected; she was without sleep; sighed repeatedly; the abdomen was elevated, the thorax still violently contracted, and oppressed with laborious respiration and heavy panting: she was incapable of utterance."

During the intensely hot summer of 1825, I experienced an attack of daymare. Immediately after dining, I threw myself on my back upon a sofa, and, before I was aware, was seized with difficult respiration, extreme dread, and utter incapability of motion or speech. I could neither move nor cry, while the breath came from my chest in broken and suffocating paroxysms. During all this time, I was perfectly awake: I saw the light glaring in at the windows in broad sultry streams; I felt the intense heat of the day pervading my frame; and heard distinctly the different noises in the street, and even the ticking of my own watch, which I had placed on the cushion beside me. I had, at the same time, the consciousness of flies buzzing around, and settling with annoying pertinacity upon my face. During the whole fit, judgment was never for a moment suspended. I felt assured that I labored under a species of incubus. I even endeavored to reason myself out of the feeling of dread which filled my mind, and longed with insufferable ardor for some one to open the door, and dissolve the spell which bound me in its

fetters. The fit did not continue above five minutes: by degrees I recovered the use of speech and motion: and as soon as they were so far restored as to enable me to call out and move my limbs, it wore insensibly away.

Upon the whole, I consider daymare and nightmare identical. They proceed from the same causes, and must be treated in a similar manner.

CHAPTER VII.

SLEEP-WALKING.

In simple dreaming, as I have already stated, some of the cerebral organs are awake, while others continue in the quiescence of sleep. Such, also, is the case in somnambulism, but with this addition, that the dream is of so forcible a nature as to stimulate into action the muscular system as well as, in most cases, one or more of the organs of the senses. If we dream that we are walking, and the vision possesses such a degree of vividness and exciting energy as to arouse the muscles of locomotion, we naturally get up and walk. Should we dream that we hear or see, and the impression be so vivid as to stimulate the eyes and ears, or, more properly speaking, those parts of the brain which take cognizance of sights and sounds, then we both see any objects, or hear any sounds, which may occur, just as if we were awake. In some cases, the muscles only are excited, and then we simply walk, without either seeing or hearing. In others, both the muscles and organs of sight are stimulated, and we not only walk, but have the

use of our eyes. In a third variety, the activity of hearing is added, and we both walk, and see, and hear. Should the senses of smell, taste, and touch be stimulated into activity, and relieved from the torpor into which they were thrown by sleep, we have them also brought into operation. If, to all this, we add an active state of the organs of speech, inducing us to talk, we are then brought as nearly as the slumbering state admits, into the condition of perfect wakefulness. The following passage from Dr. Mason Good will illustrate some of the foregoing points more fully.

"If," observes he, "the external organ of sense thus stimulated be that of sight, the dreamer may perceive objects around him, and be able to distinguish them; and if the tenor of the dreaming ideas should as powerfully operate upon the muscles of locomotion, these also may be thrown into their accustomed state of action, and he may rise from his bed, and make his way to whatever place the drift of his dream may direct him, with perfect ease, and free from danger. He will see more or less distinctly, in proportion as the organ of sight is more or less awake: yet, from the increased exhaustion, and, of course, increased torpor of the other organs, in consequence of an increased demand of sensorial power from the common stock, to supply the action of the sense and muscles immediately engaged, every other sense will probably be thrown into a deeper sleep or torpor than if the whole had been quiescent. Hence,

the ears may not be roused even by a sound that might otherwise awake the sleeper. He may be insensible not only to a slight touch, but a severe shaking of the limbs; and may even cough violently, without being recalled from his dream. Having accomplished the object of his visionary pursuit, he may safely return, even over the most dangerous precipices—for he sees them distinctly—to his bed: and the organ of sight being now quite exhausted, or there being no longer any occasion for its use, it may once more associate in the general inactivity, and the dream take a new turn, and consist of a new combination of images."*

I suspect that sleep-walking is sometimes hereditary, at least I have known instances which gave countenance to such a supposition. Its victims are generally pale, nervous, irritable persons; and it is remarked that they are subject, without any apparent cause, to frequent attacks of cold perspiration. Somnambulism, I have had occasion to remark, is very common among children; and I believe that it more frequently affects childhood than any other age. In females, it sometimes arises from amenorrhœa; and any source of bodily or mental irritation may produce it. It is a curious, and not easily explained fact, that the aged, though they dream more than the middle-aged, are less addicted to somnambulism and sleep-talking. Indeed, these phenomena are seldom noticed in old people.

It has been matter of surprise to many, that

* Good's Study of Medicine, vol. iv. p. 175, 3d edit.

somnambulists often get into the most dangerous situations without experiencing terror. But the explanation of this ought not to be attended with any real difficulty; for we must reflect, that alarm cannot be felt unless we apprehend danger, and that the latter, however great it may be, cannot excite emotion of any kind, so long as we are ignorant of its existence. This is the situation in which sleep-walkers, in a great majority of cases, stand. The reasoning faculties, which point out the existence of danger, are generally in a state of complete slumber, and unable to produce corresponding emotions in the mind. And even if danger should be perceived by a sleep-walker and avoided, as is sometimes the case, his want of terror is to be imputed to a quiescent state of the organ of *Cautiousness;* the sense of fear originating in high excitement of this particular part of the brain. That the reasoning faculties, however, are sometimes only very partially suspended we have abundant evidence, in the fact of the individual not only now and then studiously avoiding danger, but performing offices which require no small degree of judgment. In the higher kinds of somnambulism, so many of the organs of the brain are in activity, and there is such perfect wakefulness of the external senses and locomotive powers, that the person may almost be said to be awake.

Somnambulism bears a closer analogy than a common dream to madness. "Like madness, it is accompanied with muscular action, with coherent

and incoherent conduct, and with that complete oblivion (in most cases) of both, which takes place in the worst grade of madness."*

Somnambulists generally walk with their eyes open, but these organs are, nevertheless frequently asleep, and do not exercise their functions. This fact was well known to Shakspeare, as is apparent in the fearful instance of Lady Macbeth :

> "*Doctor.* You see her eyes are open.
> *Gentleman.* Ay, but their sense is shut."

The following is a remarkable instance in point, and shows that though the power of vision was suspended, that of hearing continued in full operation.

A female servant in the town of Chelmsford, surprised the family, at four o'clock one morning, by walking down a flight of stairs in her sleep, and rapping at the bed-room door of her master, who inquired what she wanted? when, in her usual tone of voice, she requested some cotton, saying that she had torn her gown, but hoped that her mistress would forgive her: at the same time bursting into tears. Her fellow-servant, with whom she had been conversing for some time, observed her get out of bed, and quickly followed her, but not before she had related the pitiful story. She then returned to her room, and a light having been procured, she was found groping to find her

* Rush's Medical Inquiries.

cotton-box. Another person went to her, when, perceiving a difference in the voice, she called out, "That is a different voice, that is my mistress," which was not the case—thus clearly showing, that she *did not see* the object before her, although her eyes were *wide open.* Upon inquiry as to what was the matter, she only said that she wanted some cotton, but that her fellow-servant had been to her master and mistress, making a fuss about it. It was now thought prudent that she should be allowed to remain quiet for some short time, and she was persuaded to lie down with her fellow-servant, until the usual hour of rising, thinking that she might then awake in her accustomed manner. This failing in effect, her mistress went up to her room, and rather angrily desired her to get up, and go to her work, as it was now six o'clock; this she refused, telling her mistress that if she did not please her, she might look out for another servant, at the same time saying, that she would not rise up at two o'clock, (pointing to the window,) to injure her health for any one. For the sake of a joke, she was told to pack up her things, and start off immediately, but to this she made no reply. She rebuked her fellow-servant for not remaining longer in bed, and shortly after this became quiet. She was afterwards shaken violently, and awoke. She then rose, and seeing the cotton-box disturbed, demanded to know why it had been meddled with, not knowing that she alone was the cause of it. In the course of the day, several questions were put

to her in order to try her recollection, but the real fact of her walking, was not made known to her; and she is still quite unconscious of what has transpired.

The next case is of a different description, and exhibits a dormant state of the sense of hearing, while sight appears, throughout, to have been in active operation.

A young man named Johns, who works at Cardrew, near Redruth, being asleep in the sump-house of that mine, was observed by two boys to rise and walk to the door, against which he leaned; shortly after, quitting that position, he walked to the engine-shaft, and safely descended to the depth of twenty fathoms, where he was found by his comrades soon after, with his back resting on the ladder. They called to him, to apprize him of the perilous situation in which he was, but he did not hear them, and they were obliged to shake him roughly till he awoke, when he appeared totally at a loss to account for his being so situated.

In Lodge's "Historical Portraits," there is a likeness, by Sir Peter Lely, of Lord Culpepper's brother, so famous as a dreamer. In 1686, he was indicted at the Old Bailey, for shooting one of the Guards, and his horse to boot. He pleaded somnambulism, and was acquitted on producing nearly fifty witnesses, to prove the extraordinary things he did in his sleep.

A very curious circumstance is related of Dr. Franklin, in the memoirs of that eminent philoso-

pher, published by his grandson. "I went out," said the Doctor, "to bathe in Martin's salt water hot bath, in Southampton, and, floating on my back, fell asleep, and slept nearly an hour, by my watch, without sinking or turning—a thing I never did before, and should hardly have thought possible."

A case still more extraordinary occurred some time ago in one of the towns on the coast of Ireland. About two o'clock in the morning, the watchmen on the Revenue quay, were much surprised at descrying a man disporting himself in the water, about a hundred yards from the shore. Intimation having been given to the Revenue boat's crew, they pushed off and succeeded in picking him up, but strange to say, he had no idea whatever of his perilous situation: and it was with the utmost difficulty they could persuade him he was not still in bed. But the most singular part of this novel adventure, and which was afterwards ascertained, was that the man had left his house at twelve o'clock that night, and walked through a difficult, and, to him, dangerous road, a distance of nearly two miles, and had actually swum one mile and a half when he was fortunately discovered and picked up.

Not very long ago a boy was seen fishing off Brest, up to the middle in water. On coming up to him, he was found to be fast asleep.

I know a gentleman who, in consequence of dreaming that the house was broken into by

thieves, got out of bed, dropped from the window (fortunately a low one) into the street; and was a considerable distance on his way to warn the police, when he was discovered by one of them, who awoke him, and conducted him home.

A case is related of an English clergyman who used to get up in the night, light his candle, write sermons, correct them with interlineations, and retire to bed again; being all the time asleep. The Archbishop of Bourdeaux mentions a similar case of a student, who got up to compose a sermon while asleep, wrote it correctly, read it over from one end to the other, or at least appeared to read it, made corrections on it, scratched out lines, and substituted others, put in its place a word which had been omitted, composed music, wrote it accurately down, and performed other things equally surprising. Dr. Gall takes notice of a miller who was in the habit of getting up every night and attending to his usual avocations at the mill, then returning to bed: on awaking in the morning, he recollected nothing of what passed during night. Martinet speaks of a saddler who was accustomed to rise in his sleep and work at his trade; and Dr. Pritchard of a farmer who got out of bed, dressed himself, saddled his horse, and rode to the market, being all the while asleep. Dr. Blacklock, on one occasion, rose from bed, to which he had retired at an early hour, came into the room where his family were assembled, conversed with them, and afterwards entertained them with a pleasant song,

without any of them suspecting he was asleep, and without his retaining after he awoke, the least recollection of what he had done. It is a singular, yet well authenticated fact, that in the disastrous retreat of Sir. John Moore, many of the soldiers fell asleep, yet continued to march along with their comrades.

The stories related of sleep-walkers are, indeed, of so extraordinary a kind, that they would almost seem fictitious, were they not supported by the most incontrovertible evidence. To walk on the house-top, to scale precipices, and descend to the bottom of frightful ravines, are common exploits with the somnambulist; and he performs them with a facility far beyond the power of any man who is completely awake. A story is told of a boy, who dreamed that he got out of bed, and ascended to the summit of an enormus rock, where he found an eagle's nest, which he brought away with him, and placed beneath his bed. Now, the whole of these events actually took place; and what he conceived, on awaking, to be a mere vision, was proved to have had an actual existence, by the nest being found in the precise spot where he imagined he had put it, and by the evidence of spectators who beheld his perilous adventure. The precipice which he ascended, was of a nature that must have baffled the most expert mountaineer, and such as, at other times, he never could have scaled. In this instance, the individual was as nearly as possible, without actually being so, awake. All his bodily,

and almost the whole of his mental powers, appear to have been in full activity. So far as the latter are concerned, we can only conceive a partial defect of the judgment to have existed, for that it was not altogether abolished is pretty evident from the fact of his proceeding to work precisely as he would have done, had he, in his waking hours, seriously resolved to make such an attempt: the defect lay in making the attempt at all; and still more in getting out of bed to do so in the middle of the night.

Somnambulism, as well as lunacy, sometimes bestows supernatural strength upon the individual. Mr. Dubrie, a musician in Bath, affords an instance of this kind. One Sunday, while awake, he attempted in vain to force open the window of his bed-room, which chanced to be nailed down; but having got up in his sleep, he repeated the attempt successfully, and threw himself out, by which he unfortunately broke his leg.

Sleep-walking is sometimes periodical. Martinet describes the case of a watchmaker's apprentice who had an attack of it every fortnight. In this state, though insensible to all external impressions, he would perform his work with his usual accuracy, and was always astonished, on awaking, at the progress he had made. The paroxysm began with a sense of heat in the epigastrium extending to the head, followed by confusion of ideas and complete insensibility, the eyes remaining open with a fixed and vacant stare. This case, which

undoubtedly originated in some diseased state of the brain, terminated in epilepsy. Dr. Gall relates that he saw at Berlin a young man, sixteen years of age, who had, from time to time, very extraordinary fits. He moved about unconsciously in bed, and had no perception of any thing that was done to him; at last he would jump out of bed, and walk with rapid steps about the room, his eyes being fixed and open. Several obstacles which were placed by Dr. Gall in his way, he either removed or cautiously avoided. He then threw himself suddenly again upon bed, moved about for some time, and finished by jumping up awake, not a little surprised at the number of curious people about him.

The facility with which somnambulists are awakened from the paroxysm, differs extremely in different cases. One man is aroused by being gently touched or called upon, by a flash of light, by stumbling in his peregrinations, or by setting his foot in water. Another remains so heavily asleep, that it is necessary to shout loudly, to shake him with violence, and make use of other excitations equally powerful. In this condition, when the sense of vision chances to be dormant, it is curious to look at his eyes. Sometimes they are shut; at other times wide open; and when the latter is the case, they are observed to be fixed and inexpressive, "without speculation," or energy, while the pupil, is contracted, as in the case of perfect sleep.

It is not always safe to arouse a sleep-walker; and many cases of the fatal effects thence arising have been detailed by authors. Nor is it at all unlikely that a person, even of strong nerves, might be violently agitated by awaking in a situation so different from that in which he lay down. Among other examples, that of a young lady, who was addicted to this affection, may be mentioned. Knowing her failing, her friends made a point of locking the door, and securing the window of her chamber in such a manner that she could not possibly get out. One night, these precautions were, unfortunately overlooked; and, in a paroxysm of somnambulism, she walked into the garden behind the house. While there, she was recognised by some of the family, who were warned by the noise she made on opening the door, and they followed and awoke her; but such was the effect produced upon her nervous system, that she almost instantly expired.

The remote causes of sleep-walking are so obscure, that it is seldom we are able to ascertain them. General irritability of frame, a nervous temperament, and bad digestion, will dispose to the affection. Being a modification of dreaming, those who are much troubled with the latter will, consequently, be most prone to its attacks. The causes, however, are, in a great majority of cases, so completely unknown, that any attempt to investigate them would be fruitless; and we are compelled

to refer the complaint to some idiosyncracy of constitution beyond the reach of human knowledge.

According to the report made by a Committee of the Royal Academy of Sciences in Paris, animal magnetism appears to have the power of inducing a peculiar species of somnambulism. The circumstances seem so curious, that, even authenticated as they are by men of undoubted integrity and talent, it is extremely difficult to place reliance upon them. The person who is thrown into the magnetic sleep is said to acquire a new conciousness, and entirely to forget all the events of his ordinary life. When this sleep is dissolved, he gets into his usual state of feeling and recollection, but forgets every thing that happened during the sleep; being again magnetized, however, the remembrance of all that occurred in the previous sleep is brought back to his mind. In one of the cases above related, the patient, a lady of sixty-four years, had an ulcerated cancer in the right breast. She had been magnetized for the purpose of dissolving the tumor, but no other effect was produced than that of throwing her into a species of somnambulic sleep, in which sensibility was annihilated, while her ideas retained all their clearness. In this state, her surgeon, M. Chapelain, disposed her to submit to an operation, the idea of which she rejected with horror *when awake.* Having formally given her consent, she undressed herself, sat down upon a chair, and the diseased glands were carefully and deliberately dissected out, the

patient conversing all the time and being perfectly insensible of pain. On awaking, she had no consciousness whatever of having been operated upon; but being informed of the circumstance, and seeing her children around her, she experienced the most lively emotion, which the magnetizer instantly checked by again setting her asleep. These facts appear startling and incredible. I can give no opinion upon the subject from any thing I have seen myself; but the testimony of such men as Cloquet, Georget, and Itard, is not to be received lightly on any phisiological point; and they all concur in bearing witness to such facts as the above. In the present state of knowledge and opinion, with regard to animal magnetism, and the sleep occasioned by it, I shall not say more at present, but refer the reader to the ample details contained in the Parisian Report; an able translation of which into English has been made by Mr. Colquhoun.

When a person is addicted to somnambulism, great care should be taken to have the door and windows of his sleeping apartment secured, so as to prevent the possibility of egress, as he sometimes forces his way through the panes of glass: this should be put out of his power, by having the shutters closed, and bolted, in such a way that they cannot be opened without the aid of a key or screw, or some such instrument, which should never be left in the room where he sleeps, but carried away, while the door is secured on the outside. Some

have recommended that a tub of water should be put by the bedside, that, on getting out, he might step into it, and be awakened by the cold; but this, from the suddenness of its operation, might be attended with bad consequences in very nervous and delicate subjects. It is a good plan to fix a cord to the bedpost, and tie the other end of it securely round the person's wrist. This will effectually prevent mischief if he attempt to get up. Whenever it can be managed, it will be prudent for another person to sleep along with him. In all cases, care should be taken not to arouse him suddenly. This must be done as gently as possible; and when he can be conducted to bed without being awakened at all, it is still better. Should he be perceived in any dangerous situation, as on the house-top, or the brink of a precipice, the utmost caution is requisite; for, if we call loudly upon him, his dread, on recovering, at finding himself in such a predicament, may actually occasion him to fall, where, if he had been left to himself, he would have escaped without injury.

To prevent a recurrence of somnambulism, we should remove, if possible, the cause which gave rise to it. Thus, if it proceed from a disordered state of the stomach, or biliary system, we must employ the various medicines used in such cases. Plenty of exercise should be taken, and late hours and much study avoided. If it arises from plethora, he must be blooded, and live low; should hysteria

produce it, antispasmodics, such as valerian, ammonia, assafœtida, and opium may be necessary.

But, unfortunately, we can often refer sleep-walking to no complaint whatever. In this case, all that can be done is to carry the individual as safely as possible through the paroxysm, and prevent him from injury by the means we have mentioned. In many instances, the affection will wear spontaneously away: in others, it will continue in spite of every remedy.

CHAPTER VIII.

SLEEP-TALKING.

This closely resembles somnambulism, and proceeds from similar causes. In somnambulism, those parts of the brain which are awake call the muscles of the limbs into activity; while, in sleep-talking, it is the muscles necessary for the production of speech which are animated by the waking cerebral organs. During sleep, the organ of *Language* may be active, either singly or in combination with other parts of the brain; and of this activity sleep-talking is the result.* If, while we

* Among the insane, the organ just mentioned is occasionally excited to such a degree that even, in the waking state, the patient, however *desirous*, is literally *unable* to refrain from speaking. Mr. W. A. F. Browne has reported two cases of this nature in the 37th No. of the Phrenological Journal. The first is that of a woman in the hospital of *La Salpetrière* in Paris. Whenever she encounters the physician or other of the attendants, she bursts forth into an address which is delivered with incredible rapidity and vehemence, and is generally an abusive or ironical declamation against the tyranny, cruelty, and injustice to which she is exposed. In the midst of her harangues, however, she introduces

dream that we are conversing with some one, the organ of *Language* is in such a high state of activity as to rouse the muscles of speech, we are sure to talk. It often happens, however, that the cerebral parts, though sufficiently active to make us dream that we are speaking, are not excited so much as to make us actually speak. We only suppose we are carrying on a conversation, while, in reality, we are completely silent. To produce sleep-talking, therefore, the brain, in some of its functions, must be so much awake as to put into action the voluntary muscles by which speech is produced.

The conversation in this state, is of such subjects as our thoughts are most immediately occupied with; and its consistency or incongruity depends upon that of the prevailing ideas — being sometimes perfectly rational and coherent; at other times, full of absurdity. The voice is seldom the same as in the waking state. This I would impute to the organs of hearing being mostly dormant, and consequently unable to guide the mo-

frequent and earnest parenthetical declarations "that she does not mean what she says; that though she vows vengeance and showers imprecations on her medical attendant, she loves him, and feels grateful for his kindness and forbearance; and that, though anxious to evince her gratitude and obedience by silence, she is constrained by an invisible agency to speak." In the other case, the individual speaks constantly: "sleep itself does not yield an intermission; and there is strong reason to believe that a part, at least, of his waking orations is delivered either without the cognizance of the other powers, or without consciousness on the part of the speaker."

dulations of sound. The same fact is observable in very deaf persons, whose speech is usually harsh, unvaried, and monotonous. Sometimes the faculties are so far awake, that we can manage to converse with the individual, and extract from him the most hidden secrets of his soul: circumstances have thus been ascertained which would otherwise have remained in perpetual obscurity. By a little address in this way, a gentleman lately detected the infidelity of his wife from some expressions which escaped her while asleep, and succeeded in finding out that she had a meeting arranged with her paramour for the following day. Lord Byron describes a similar scene in his "Parisina:"

"And Hugo is gone to his lonely bed,
To covet there another's bride;
But she must lay her conscious head
A husband's trusting heart beside.
But fever'd in her sleep she seems,
And red her cheek with troubled dreams,
And *mutters she in her unrest*
A name she dare not breathe by day,
And clasps her lord unto her breast
Which pants for one away."

From what has been said of somnambulism, the reader will be prepared for phenomena equally curious as regards sleep-talking. Persons have been known, for instance, who delivered sermons and prayers during sleep; among others, Dr. Haycock, Professor of Medicine in Oxford. He would give out a text in his sleep, and deliver a good sermon

upon it; nor could all the pinching and pulling of his friends prevent him. "One of the most remarkable cases of speaking during sleep," observes a writer in Frazer's Magazine, "is that of an American lady, now (we believe) alive, who preached during her sleep, performing regularly every part of the Presbyterian service, from the psalm to the blessing. This lady was the daughter of respectable and even wealthy parents; she fell into bad health, and, under its influence, she disturbed and annoyed her family by her nocturnal eloquence. Her unhappy parents, though at first surprised, and perhaps flattered by the exhibition in their family of so extraordinary a gift, were at last convinced that it was the result of disease; and, in the expectation that their daughter might derive benefit from change of scene, as well as from medical skill, they made a tour with her of some length, and visited New York and some of the other great cities of the Union. We know individuals who have heard her preach during the night in steam-boats; and it was customary, at tea parties in New York, (in the houses of medical practitioners,) to put the lady to bed in a room adjacent to the drawing-room, in order that the dilletanti might witness so extraordinary a phenomenon. We have been told by ear-witnesses, that her sermons, though they had the appearance of connected discourses, consisted chiefly of texts of Scripture strung together. It is strongly impress-

ed upon our memory that some of her sermons were published in America."

In the Edinburgh Journal of Science, a lady who was subject to spectral illusions, is described as being subject to talk in her sleep with great fluency, to repeat great portions of poetry, especially when unwell, and even to *cap* verses for half an hour at a time, never failing to quote lines beginning with the final letter of the preceding till her memory was exhausted.

Dr. Dyce, in the Edinburgh Philosophical Transactions, relates the case of Maria C——, who, during one paroxysm of somnambulism, recollected what took place in a preceding one, without having any such recollection during the interval of wakefulness. One of the occasions in which this young woman manifested the power in question, was of a very melancholy nature. Her fellow-servant, a female of abandoned character, having found out that, on awaking, she entirely forgot every thing which occurred during the fit, introduced by stealth into the house, a young man of her acquaintance, and obtained for him an opportunity of treating Maria in the most brutal and treacherous manner. The wretches succeeded in their object, by stopping her mouth with the bedclothes, by which and other means, they overcame the vigorous resistance she was enabled to make to their villany, even in her somnolent state. On awaking, she had no consciousness whatever of the outrage; but some days afterwards, having

fallen into the same state, it recurred to her memory, and she related to her mother all the revolting particulars. The state of mind in this case was perfectly analogous to that which is said to occur in the magnetic sleep; but the particular state of the brain which induces such conditions will, I believe, ever remain a mystery.*

* A case, in some respects similar, was published in the Medical Repository, by Dr. Mitchell, who received the particulars of it from Major Ellicot, Professor of Mathematics in the United States Military Aeademy at West Point. The subject was a young lady, of a good constitution, excellent capacity, and well educated. "Her memory was capacious and well stored with a copious stock of ideas. Unexpectedly, and without any forewarning, she fell into a profound sleep, which continued several hours beyond the ordinary term. On waking, she was discovered to have lost every trait of acquired knowledge. Her memory was *tabula rasa* —all vestiges, both of words and things were obliterated and gone. It was found necessary for her to learn every thing again. She even acquired, by new efforts, the art of spelling, reading, writing, and calculating, and gradually became acquainted with the persons and objects around, like a being for the first time brought into the world. In these exercises she made considerable proficiency. But after a few months, another fit of somnolency invaded her. On rousing from it, she found herself restored to the state she was in before the first paroxysm; but was wholly ignorant of every event and occurrence that had befallen her afterwards. The former condition of her existence she now calls the Old State, and the latter the New State; and she is as unconscious of her double character as two distinct persons are of their respective natures. For example, in her old state, she possesses all the original knowledge; in her new state, only what she acquired since. If a lady or gentleman be introduced to her in the old state, and *vice versa*, (and so of all other matters) to know them satisfactorily, she must learn them in both states. In the old state, she possesses fine powers of penmanship, while in the new, she

The following singular case of sleep-talking, combined with somnambulism, will prove interesting to the reader: —

"A very ingenious and elegant young lady, with light eyes and hair, about the age of seventeen, in other respects well, was suddenly seized with this very wonderful malady. The disease began with violent convulsions of almost every muscle of her body, with great, but vain efforts to vomit, and the most violent hiccoughs that can be conceived: these were succeeded in about an hour with a fixed spasm; in which, one hand was applied to her head, and the other to support it: in about half an hour these ceased, and the reverie began suddenly, and was at first manifest by the look of her eyes and countenance, which seemed to express attention. Then she conversed aloud with imaginary persons, with her eyes open, and could not, for about an hour, be brought to attend to the stimulus of external objects by any kind of violence which it was possible to use: these symptoms returned in this order every day for five or six weeks.

"These conversations were quite consistent, and

writes a poor, awkward hand, having not had time or means to become expert. During four years and upwards, she has had periodical transitions from one of these states to the other. The alterations are always consequent upon a long and sound sleep. Both the lady and her family are now capable of conducting the affair without embarrassment. By simply knowing whether she is in the old or new state, they regulate the intercourse and govern themselves accordingly."

we could understand what she supposed her imaginary companions to answer, by the continuation of her part of the discourse. Sometimes she was angry, at other times showed much wit and vivacity, but was most frequently inclined to melancholy. In these reveries, she sometimes sung over some music with accuracy, and repeated whole passages from the English Poets. In repeating some lines from Mr. Pope's works, she had forgot one word, and began again, endeavoring to recollect it; when she came to the forgotten word, it was shouted aloud in her ears, and this repeatedly, to no purpose; but by many trials she at length regained it herself.

"Those paroxysms were terminated with the appearance of inexpressible surprise and great fear, from which she was some minutes in recovering herself, calling on her sister with great agitation, and very frequently underwent a repetition of convulsions, apparently from the pain of fear.

"After having thus returned for about an hour a-day, for two or three weeks, the reveries seemed to become less complete, and some of the circumstances varied, so that she could walk about the room in them, without running against any of the furniture; though these motions were at first very unsteady and tottering. And afterwards, she once drank a dish of tea, when the whole apparatus of the tea-table was set before her, and expressed some suspicion that a medicine was put into it; and once seemed to smell at a tuberose, which was in

flower in her chamber, and deliberated aloud about breaking it from the stem, saying, 'It would make her sister so charmingly angry.' At another time, in her melancholy moments, she heard the bell, and then taking off one of her shoes as she sat upon the bed, 'I love the color black,' says she; 'a little wider and a little longer, and even this might make me a coffin!' Yet it is evident she was not sensible at this time, any more than formerly, of seeing or hearing any person about her; indeed, when great light was thrown upon her by opening the shutters of the window, she seemed less melancholy: and when I have forcibly held her hands, or covered her eyes, she appeared to grow impatient, and would say, she could not tell what to do, for she could neither see nor move. In all these circumstances, her pulse continued unaffected, as in health. And when the paroxysm was over, she could never recollect a single idea of what had passed."*

Equally extraordinary is the following instance of combined sleep-talking and somnambulism:

"A remarkable instance of this affection occurred to a lad named George David, sixteen years and a half old, in the service of Mr. Hewson, butcher, of Bridge-Road, Lambeth. At about twenty minutes after nine o'clock, the lad bent forward in his chair, and rested his forehead on his hands, and in ten minutes started up, went for his

* Darwin's "Zoonomia."

whip, put on his one spur, and went thence to the stable; not finding his own saddle in the proper place, he returned to the house and asked for it. Being asked what he wanted with it, he replied, to go his rounds. He returned to the stable, got on the horse without the saddle, and was proceeding to leave the stable: it was with much difficulty and force that Mr. Hewson, junior, assisted by the other lad, could remove him from the horse; his strength was great, and it was with difficulty he was brought in doors. Mr. Hewson, senior, coming home at this time, sent for Mr. Benjamin Ridge, an eminent practitioner, in Bridge-Road, who stood by him for a quarter of an hour, during which time the lad considered himself as stopped at the turnpike-gate, and took sixpence out of his pocket to be changed; and holding out his hand for the change, the sixpence was returned to him. He immediately observed, 'None of your nonsense —that is the sixpence again; give me my change;' when two pence halfpenny was given to him, he counted it over, and said, 'None of your gammon; that is not right; I want a penny more;' making the three pence halfpenny, which was his proper change. He then said, 'Give me my castor, (meaning his hat,) which slang term he had been in the habit of using, and then began to whip and spur to get his horse on. His pulse at this time was 136, full and hard; no change of countenance could be observed, nor any spasmodic affection of the muscles, the eyes remaining close the whole of

the time. His coat was taken off his arm, shirt-sleeves tucked up, and Mr. Ridge bled him to 32 ounces; no alteration had taken place in him during the first part of the time the blood was flowing; at about 24 ounces, the pulse began to decrease; and when the full quantity named above had been taken, it was at 80—a slight perspiration on the forehead. During the time of bleeding, Mr. Hewson related a circumstance of a Mr. Harris, optician, in Holborn, whose son, some years since, walked out on the parapet of the house in his sleep. The boy joined the conversation, and observed, 'He lived at the corner of Brownlow-Street.' After the arm was tied up, he unlaced one boot, and said he would go to bed: in three minutes from this time, he awoke, got up, and asked what was the matter, (having then been one hour in the trance,) not having the slightest recollection of any thing that had passed, and wondered at his arm being tied up, and at the blood, &c. A strong aperient medicine was then administered: he went to bed, slept well, and the next day appeared perfectly well, excepting debility from the bleeding, and operation of the medicine, and has no recollection whatever of what had taken place. None of his family or himself were ever affected in this way before."*

Sleep-talking is generally such a trivial affection as not to require any treatment whatever. In

* "Lancet," vol. i.

every case the digestive organs must be attended to, and, if disordered, put to rights by suitable medicines. And should the affection proceed, or be supposed to proceed from hypochondria, hysteria, or the prevalence of any strong mental emotion, these states must be treated according to general principles. When it arises from idiosyncrasy, and becomes habitual, I believe that no means which can be adopted will be of much avail. As, in the case of somnambulism, it very frequently happens that the affection, after continuing for a long time and baffling every species of treatment, disappears spontaneously.

CHAPTER IX.

SLEEPLESSNESS.

Sleep takes place as soon as the sensorial power that keeps the brain awake is expended, which, under common circumstances, occurs at our ordinary hour of going to rest, or even sooner, if any soporific cause sufficiently strong should chance to operate. But the above power may be increased by various means, as in cases of physical suffering, or excited imagination, and, consequently, is not expended at the usual time. In this case, the person remains awake, and continues so till the period of its expenditure, which may not happen for several hours after he lies down, or even not at all, during the whole of that night. Now, whatever increases the sensorial power, whether it be balls, concerts, grief, joy, or bodily pain, is prejudicial to repose. By them the mind is exalted to a pitch of unnatural action, from which it is necessary it should descend before it can roll into the calm channel of sleep.

Whatever stimulates the external senses, however slightly, may prevent sleep. Thus, the tick-

ing of a clock has this effect with very sensitive people; and a candle burning in the chamber is attended with the same result. Even when the eyes are shut this may take place, for the eye-lids are sufficiently transparent to transmit a sense of light to the retina. For the same reason, the light of day peering in at the window may awake us from or prevent slumber. It is said that Napoleon could never sleep if exposed to the influence of light, although, in other circumstances, slumber appeared at his bidding with surprising readiness.

A constitutional restlessness is sometimes brought on by habitually neglecting to solicit sleep when we lie down, by which means the brain is brought into such a state of irritability, that we can hardly sleep at all. Chronic wakefulness, originating from any mental or bodily affection, sometimes degenerates into a habit, in which the sufferer will remain for weeks, months, or even years, if authors are to be believed, awake. In the disease called delirium tremens, wakefulness is a constant symptom, and frequently continues for many successive days and nights. It is also an attendant upon all disorders accompanied by acute suffering, especially when the brain is affected, as in phrenitis, or fever. Maniacs, from the excited state of their sensorium, are remarkably subject to want of sleep; and this symptom is often so obstinate as to resist the most powerful remedies we can venture to prescribe.

Certain stimulating agents, such as tea or coffee,

taken shortly before going to bed, have often the effect of preventing sleep. I would impute this to their irritative properties, which, by supplying the brain with fresh sensorial power, enable it to carry on uninterruptedly all its functions longer than it would otherwise do, and consequently prevent it from relapsing into slumber at the usual period.

Any uneasy bodily feeling has the same effect—both preventing the accession of sleep, and arousing us from it when it has fairly taken place. Thus, while moderate fatigue provokes slumber, excessive fatigue, owing to the pain and irritation it necessarily occasions, drives it away. Sickness, cold, heat, pregnancy, the ordinary calls of nature, a disagreeable bed, the want of an accustomed supper, too heavy a supper, or uneasiness of any kind, have the same result. Cold is most apt to induce sleeplessness, when partial, especially if it be confined to the feet; for when general and sufficiently intense, it has the opposite effect, and gives rise to drowsiness. Certain diseases, such as hemicrania, tic douloureux, &c., have actually kept the person awake for three successive months; and all painful affections prevent sleep more or less. But the most violent tortures cannot altogether banish, however much they may retard it. Sooner or later the fatigue, which a want of it occasions, prevails, and slumber ultimately ensues.

Sleeplessness is sometimes produced by a sense of burning heat in the soles of the feet and palms of the hands, to which certain individuals are sub-

ject some time after lying down. This seems to proceed from a want of perspiration in these parts; owing generally to impaired digestion.

Mental emotions, of every description, are unfavorable to repose. If a man, as soon as he lays his head upon the pillow, can banish thinking, he is morally certain to fall asleep. There are many individuals so constituted, that they can do this without effort, and the consequence is, they are excellent sleepers. It is very different with those whose minds are oppressed by care, or over-stimulated by excessive study. The sorrowful man, above all others, has the most need of sleep; but, far from shedding its benignant influence over him, it flies away, and leaves him to the communionship of his own sad thoughts:

> "*His* slumbers — if *he* slumber — are not sleep,
> But a continuance of enduring thought."

It is the same with the man of vivid imagination. His fancy, instead of being subdued by the spell of sleep, becomes more active than ever. Thoughts in a thousand fantastic forms — myriads of waking dreams — pass through his mind, whose excessive activity spurns at repose, and mocks all his endeavors to reduce it to quiescence. Great joy will often scare away sleep for many nights; but, in this respect, it is far inferior to grief, a fixed attack of which has been known to keep the sufferer awake for several months. Those who meditate much, seldom sleep well in the early part

of the night: they lie awake, for perhaps two or three hours, after going to bed, and do not fall into slumber till towards morning. Persons of this description often lie long, and are reputed lazy by early risers, although, it is probable, they actually sleep less than these early risers themselves. Long continued study is highly prejudicial to repose. Boerhaave mentions that, on one occasion, owing to this circumstance, he did not close his eyes for six weeks.

Nothing is so hurtful both to the mind and body as want of sleep. Deprived of the necessary portion, the person gets wan, emaciated and listless, and very soon falls into bad health; the spirit becomes entirely broken, and the fire of even the most ardent dispositions is quenched. Nor is this law peculiar to the human race, for it operates with similar power upon the lower animals, and deprives them of much of their natural ferocity. An illustration of this fact is afforded in the taming of wild elephants. These animals, when first caught, are studiously prevented from sleeping; in consequence of which, they become, in a few days, comparatively mild and harmless. Restlessness, when long protracted, may terminate in delirium, or confirmed insanity; and, in many diseases, it is the most obstinate symptom we have to struggle against. By it alone, all the existing bad symptoms are aggravated; and as soon as we can succeed in overcoming it, every thing disagreeable and dangerous frequently wears away, and the person is restored to health.

In restlessness, both the perspiration and urinary secretions are usually much increased; there is also an accession of heat in the system, and a general feverish tendency, unless the want of sleep should proceed from cold.

With regard to the treatment of sleeplessness, a very few words will suffice: in fact, upon this head little more can be said, than a recommendation to obviate the causes from whence it proceeds, and it will naturally disappear. I may mention, however, that when there is no specific disease, either of body or mind, to which the want of sleep can be imputed, the person should keep himself in as cheerful a mood as possible—should rise early, if his strength permits it, and take such exercise as to fatigue himself moderately; and if all these means fail, that he ought to make use of opium. In all cases of restlessness, indeed, this medicine must be had recourse to, if the affection resists every other remedy, and continues so long as to endanger health. Those preparations of opium, the acetate and muriate of morphia, have latterly been a good deal used, and with excellent effect, for the same purpose. When neither opium nor its preparations agrees with the constitution, it becomes necessary to employ other narcotics, especially hyosciamus or hop. A pillow of hops sometimes succeeds in inducing sleep when other means fail. Such was the case with his late majesty, George III., who, by this contrivance, was relieved from the protracted wakefulness under

which he labored for so long a time. In giving medicines to produce sleep, great attention must be paid to the disease which occasions the restlessness; for, in phrenitis, high fever, and some other disorders, it would be most injurious to administer anodynes of any kind. In such cases, as the restlessness is merely a symptom of the general disease, its removal will depend upon that of the latter. When, however, the acute symptoms have been overcome, and nothing but chronic wakefulness, the result of debility, remains behind, it then becomes necessary to have recourse to opium, or such other remedies as may be considered applicable to the particular case. Studious men ought to avoid late reading; and, on going to bed, endeavor to abstract their minds from all intrusive ideas. They should try to circumscribe their thoughts within the narrowest possible circle, and prevent them from becoming rambling or excursive. I have often coaxed myself asleep by internally repeating half a dozen of times, any well known rhyme. While doing so, the ideas must be strictly directed to this particular theme, and prevented from wandering; for sometimes, during the process of repetition, the mind takes a strange turn, and performs two offices at the same time, being directed to the rhyme on the one hand, and to something else on the other; and it will be found that the hold it has of the former, is oftentimes much weaker than of the latter. The great secret is, by a strong effort of the will to compel

the mind to depart from the favorite train of thought into which it has run, and address itself solely to the internal repetition of what is substituted in its place. If this is persevered in, it will generally be found to succeed; and I would recommend all those who are prevented from sleeping, in consequence of too active a flow of ideas, to try the experiment. As has been already remarked, the more the mind is brought to turn upon a single impression, the more closely it is made to approach to the state of sleep, which is the total absence of all impressions. People should never go to bed immediately after studying hard, as the brain is precisely in that state of excitement which must prevent sleep. The mind ought previously to be relaxed by light conversation, music, or any thing which requires little thought.

In some cases of restlessness, sleep may be procured by the person getting up, and walking for a few minutes about the room. It is not easy to explain on what principle this acts, but it is certain, that by such means sleep sometimes follows, where previously it had been solicited in vain. It is customary with some people to read themselves into slumber, but dangerous accidents have arisen from this habit, in consequence of the lighted candle setting fire to the bed curtains. A safer and more effectual way is to get another person to read; in which case, sleep will very generally take place, especially if the subject in question is not one of much interest, or read in a dry monotonous man-

ner. When sleeplessness proceeds from the heat of the weather, the person should lie very lightly covered, and let the air circulate freely through his room. A cold bath taken shortly before going to bed, or sponging the body with cold water, will often ensure a comfortable night's rest in the hot season of the year. When it arises from heat in the soles or palms, these parts should be bathed with cold vinegar and water, before lying down, and, if necessary, occasionally afterwards till the heat abates, which usually occurs in two or three hours. Attention must also be paid to the stomach and bowels.

An easy mind, a good digestion, and plenty of exercise in the open air, are the grand conducives to sound sleep;—and, accordingly, every man whose repose is indifferent, should endeavor to make them his own as soon as possible. When sleeplessness becomes habitual, the utmost care ought to be taken to overcome the habit, by the removal of every thing that has a tendency to cherish it.

CHAPTER X.

DROWSINESS.

Drowsiness is symptomatic of apoplexy and some other diseases, but sometimes it exists as an idiopathic affection. There are persons who have a disposition to sleep on every occasion. They do so at all times, and in all places. They sleep after dinner; they sleep in the theatre; they sleep in church. It is the same to them in what situation they may be placed: sleep is the great end of their existence—their occupation—their sole employment. Morpheus is the deity at whose shrine they worship—the only god whose influence over them is omnipotent. Let them be placed in almost any circumstances, and their constitutional failing prevails. It falls upon them in the midst of mirth; it assails them when travelling. Let them sail, or ride, or sit, or lie, or walk, sleep overtakes them—binds their faculties in torpor; and makes them dead to all that is passing around. Such are our dull, heavy-headed, drowsy mortals, those sons and daughters of phlegm—with passions as inert as a Dutch fog, and intellects as sluggish as the

movements of the hippopotamus or leviathan. No class of society is so insufferable as this. There is a torpor and obtuseness about their faculties, which render them dead to every impression. They have eyes and ears, yet they neither see nor hear; and the most exhilarating scenes may be passing before them without once attracting their notice. It is not uncommon for persons of this stamp to fall asleep in the midst of a party to which they have been invited; Mr. Mackenzie, in one of his papers, speaks of an honest farmer having done so alongside of a young lady, who was playing on the harp for his amusement. The cause of this constitutional disposition to doze upon every occasion, seems to be a certain want of activity in the brain, the result of which is, that the individual is singularly void of fire, energy, and passion. He is of a phlegmatic temperament, generally a great eater, and very destitute of imagination. Such are the general characteristics of those who are predisposed to drowsiness: the cases where such a state coexists with intellectual energy are few in number.

Boerhaave speaks of an eccentric physician who took it into his head that sleep was the natural state of man, and accordingly slept eighteen hours out of the twenty-four—till he died of apoplexy, a disease which is always apt to be produced by excessive sleep.

Cases of constitutional drowsiness are in a great measure without remedy, for the soporific tendency

springs from some natural defect, which no medicinal means can overcome.

Equally impossible of cure is the affection when it arises, as it very often does, from old age. Even long before this period of life, as at the age of fifty or sixty, people very often get into somnolent habits, and are pretty sure to fall asleep if they attempt to read, or even if they place themselves in an easy chair before the fire. I know of no cure for this indolent propensity, unless indeed the habits arise, as it sometimes does, from corpulency, in which case it is more manageable, in so far as its cause is occasionally capable of being removed.

Drowsiness sometimes proceeds from a fulness of blood in the head, or a disordered state of the digestive organs. When it originates from the former cause, it becomes necessary to have recourse to general or local blood-letting. The person, likewise, should use, from time to time, mild laxatives, live temperately, and take abundance of exercise. Medicines of a similar kind are necessary when the affection arises from the state of the stomach and bowels: so soon as these organs are restored to health, the symptomatic drowsiness will naturally disappear.

Persons who feel the disposition to drowsiness gaining upon them, should struggle vigorously against it; for when once the habit is fairly established, its eradication is very difficult. Exercise of body and mind, early rising and the cold bath, are among the best means for this purpose.

CHAPTER XI.

PROTRACTED SLEEP.

I HAVE already mentioned a few instances of individuals remaining for days or weeks in a state of profound sleep. The nature of this extraordinary affection is in a great measure, unknown ; it arises, in most cases, without any obvious cause, generally resists every method that can be adopted for removing it, and disappears of its own accord.

The case of Mary Lyall, related in the 8th volume of the "Transactions of the Royal Society of Edinburgh," is one of the most remarkable instances of excessive somnolency on record. This woman fell asleep on the morning of the 27th of June, and continued in that state till the evening of the 30th of the same month, when she awoke, and remained in her usual way till the 1st of July, when she again fell asleep, and continued so till the 8th of August. She was bled, blistered, immersed in the hot and cold bath, and stimulated in almost every possible way, without having any consciousness of what was going on. For the first seven days she continued motionless, and ex-

hibited no inclination to eat. At the end of this time she began to move her left hand; and, by pointing to her mouth, signified a wish for food. She took readily what was given to her; still she discovered no symptoms of hearing, and made no other kind of bodily movement than of her left hand. Her right hand and arm, particularly, appeared completely dead, and bereft of feeling; and even when pricked with a pin, so as to draw blood, never shrunk in the least degree. At the same time, she instantly drew back her left arm whenever it was touched by the point of the pin. She continued to take food whenever it was offered to her. For the first two weeks, her pulse generally stood at 50, during the third and fourth week, about 60; and, on the day before her recovery, at 70 or 72. Her breathing was soft and almost imperceptible, but during the night-time she occasionally drew it more strongly, like a person who has first fallen asleep. She evinced no symptom of hearing, till about four days before her recovery. On being interrogated, after this event, upon her extraordinary state, she mentioned that she had no knowledge of any thing that had happened—that she had never been conscious of either having needed or received food, or of having been blistered; and expressed much surprise on finding her head shaved. She had merely the idea of having passed a long night in sleep.

The case of Elizabeth Perkins is also remarkable. In the year 1788, she fell into a profound

slumber, from which nothing could arouse her, and remained in this state for between eleven and twelve days, when she awoke of her own accord, to the great joy of her relatives, and wonder of the neighborhood. On recovering, she went about her usual business; but this was only for a short period, for in a week after she relapsed again into a sleep which lasted some days. She continued, with occasional intervals of wakefulness, in a dozing state for several months, when she expired.

There was lately at Kirkheaton a remarkable instance of excessive sleep. A poor paralytic, twenty years of age, was seldom, for the period of twelve months, awake more than three hours in the twenty-four. On one occasion, he slept for three weeks; he took not a particle of either food or drink; nothing could rouse him, even for a moment; yet his sleep appeared to be calm and natural.

The case of Elizabeth Armitage of Woodhouse, near Leeds, may also be mentioned. The age of this person was sixty-nine years. She had been for several months in a decline, during which she had taken very little sustenance, when she fell into a state of lethargic stupor, on the morning of the 1st of July, 1827, in which condition she remained, without uttering one word, receiving any food, or showing any signs of life, except breathing, which was at times almost imperceptible. In this state she continued for eight days, when she expired without a groan.

Excessively protracted sleep may ensue from the injudicious use of narcotics. A very striking instance of this kind occurred on 17th February, 1816, near Lymington. In consequence of a complaint with which a child had been painfully afflicted for some time previous, its mother gave it an anodyne, (probably laudanum,) for the purpose of procuring it rest. The consequence was, that is fell into a profound sleep, which continued for three weeks. In this case, in addition to an excessive dose, the child must have possessed some constitutional idiosyncrasy, which favored the operation of the medicine in a very powerful manner.

One of the most extraordinary instances of excessive sleep, is that of the lady of Nismes, published in 1777, in the "Memoirs of the Royal Academy of Sciences at Berlin." Her attacks of sleep took place periodically, at sunrise and about noon. The first continued till within a short time of the accession of the second, and the second till between seven and eight in the evening—when she awoke, and continued so till the next sunrise. The most extraordinary fact connected with this case is, that the first attack commenced always at day-break, whatever might be the season of the year, and the other always immediately after twelve o'clock. During the brief interval of wakefulness which ensued shortly before noon, she took a little broth, which she had only time to do, when the second attack returned upon her, and kept her asleep till the evening. Her sleep was remarkably profound,

and had all the characters of complete insensibility, with the exception of a feeble respiration, and a weak but regular movement of the pulse. The most singular fact connected with her remains to be mentioned. When the disorder had lasted six months, and then ceased, she had an interval of perfect health for the same length of time. When it lasted one year, the subsequent interval was of equal duration. The affection at last wore gradually away; and she lived, entirely free of it, for many years after. She died in the eighty-first year of her age, of dropsy, a complaint which had no connexion with her preceding disorder.

There are a good many varieties in the phenomena of protracted sleep. In some cases, the individual remains for many days without eating or drinking; in others, the necessity for these natural wants arouses him for a short time from his slumber, which time he employs in satisfying hunger and thirst, and then instantly gets into his usual state of lethargy. The latter kind of somnolency is sometimes feigned by impostors for the purpose of extorting charity; on this account, when an instance of the kind occurs, it should be narrowly looked into, to see that there is no deception.

The power possessed by the body of subsisting for such a length of time in protracted sleep, is most remarkable, and bears some analogy to the abstinence of the polar bear in the winter season. It is to be observed, however, that during slumber,

life can be supported by a much smaller portion of food than when we are awake, in consequence of the diminished expenditure of the vital energy which takes place in the former state.

All that can be done for the cure of protracted somnolency, is to attempt to rouse the person by the use of stimuli, such as blistering, pinching, the warm or cold bath, the application of sternutatories to the nose, &c. Blooding should be had recourse to, if we suspect any apoplectic tendency to exist. Every means must be employed to get nourishment introduced into the stomach; for this purpose, if the sleeper cannot swallow, nutritious fluids should be forced, from time to time, into this organ by means of Jukes' pump, which answers the purpose of filling as well as evacuating it.

CHAPTER XII.

SLEEP FROM COLD.

This kind of sleep is so peculiar, that it requires be considered separately. The power of cold in occasioning slumber, is not confined to man, but pervades a very extensive class of animals. The hybernation, or winter torpitude of the brown and Polar bear, results from this cause. Those animals continue asleep for months; and do not awake from their apathy till revived by the genial temperature of spring. The same is the case with the hedgehog, the badger, the squirrel, and several species of the mouse and rat tribes, such as the dormouse and marmot: as also with the land tortoise, the frog, and almost all the individuals of the lizard, insect, and serpent tribes. Fishes are often found imbedded in the ice, and, though in a state of apparent death, become at once lively and animated on being exposed to heat. "The fish froze," says Captain Franklin, "as fast as they were taken out of the nets, and in a short time became a solid mass of ice, and by a blow or two of the hatchet were easily split open, when the intestines might

be removed in one lump. If, in this completely frozen state, they were thawed before the fire, they recovered their animation." Sheep sometimes remain for several weeks in a state of torpitude, buried beneath wreaths of snow. Swallows are occasionally in the same state, being found torpid and insensible in the hollows of trees, and among the ruins of old houses during the winter season; but with birds this more rarely happens, owing, probably, to the temperature of their blood being higher than that of other animals, and thereby better enabling them to resist the cold. Almost all insects sleep in winter. This is particularly the case with the crysalis, and such grubs as cannot, at that season, procure their food. In hybernating animals, it is impossible to trace any peculiarity of structure which disposes them to hybernate, and enables life to be sustained during that period. So far the subject is involved in deep obscurity. According to Dr. Edwards, the temperature of such animals sinks considerably during sleep, even in summer.

Want of moisture produces torpor in some animals. This is the case with the garden snail, which revives if a little water is thrown on it. Snails, indeed, have revived after being dried for fifteen years. Mr. Baucer has restored the *vibris tritici* (a species of worm) after perfect torpitude and apparent death for five years and eight months, by merely soaking it in water. The *furcularia anostobea*, a small microscopic animal,

may be killed and revived a dozen times by drying it and then applying moisture. According to Spallanzani, animalculi have been recovered by moisture after a torpor of twenty-seven years. Larger animals are thrown into the same state from want of moisture. Such, according to Humboldt, is the case with the alligator and boa constrictor during the dry season in the plains of Venezuela, and with the *centenes solosus*, a species of hedge-hog found in Madagascar; so that dryness as well as cold, produces hybernation, if, in such a case, we may use that term.

The power of intense cold in producing sleep, is very great in the human subject, and nothing in the winter season is more common than to find people lying dead in fields and on the highways from such a cause. An overpowering drowsiness steals upon them, and if they yield to its influence, death is almost inevitable. This is particularly the case in snow-storms, in which it is often impossible to get a place of shelter.

This state of torpor, with the exception perhaps of catalepsy, is the most perfect sleep that can be imagined: it approaches almost to death in its apparent annihilation of the animal functions. Digestion is at an end, and the secretions and excretions suspended: nothing seems to go on but circulation, respiration, and absorption. The two former are extremely languid,* but the latter

* The extremely languid, or almost suspended state of these two functions, is demonstrated by the fact, that an animal in a

tolerably vigorous, if we may judge from the quantity of fat which the anima lloses during its torpid state. The bear, for example, on going to its wintry rest, is remarkably corpulent; on awaking from it, quite emaciated; in which state, inspired by the pangs of hunger, it sallies forth with redoubled fury upon its prey. Life is sustained by the absorption of this fat, which for months serves the animal as provision. Such emaciation, however, is not common to all hybernating animals, some of whom lose little or nothing by their winter torpitude.

Hybernation may be prevented. Thus the polar bear in the menagerie at Paris never hybernated; and in the marmot and hedge-hog hybernation is prevented if the animals be kept in a higher temperature. It is also a curious fact, that an animal, if exposed to a more intense cold, while hybernating, is awaked from its lethargy. Exposing a hybernating animal to light has also, in many cases, the same effect.

Some writers, and Buffon among the rest, deny that such a state of torpor as we have here described, can be looked upon as sleep. This is a question into which it is not necessary at present to enter. All I contend for, is, that the state of the mind is precisely the same here as in ordinary sleep—that, in both cases, the organs of the senses and of volition are equally inert; and that though

state of hybernation may be placed for an hour in a jar of hydrogen without suffering death.

the conditions of the secretive and circulating systems are different, so many circumstances are nevertheless identical, that we become justified in considering the one in a work which professes to treat of the other.

In Captain Cook's first voyage, a memorable instance is given of the power of intense cold in producing sleep. It occurred in the island of Terra-del-Fuego. Dr. Solander, Mr. Banks, and several other gentlemen had ascended the mountains of that cold region, for the purpose of botanizing and exploring the country. "Dr. Solander, who had more than once crossed the mountains which divide Sweden from Norway, well knew that extreme cold, especially when joined with fatigue, produces a torpor and sleepiness that are almost irresistible. He, therefore, conjured the company to keep moving whatever pain it might cost them, and whatever relief they might be promised by an inclination to rest. 'Whoever sits down,' said he, 'will sleep; and whoever sleeps, will wake no more.' Thus at once admonished and alarmed, they set forward; but while they were still upon the naked rock, and before they had got among the bushes, the cold became suddenly so entense as to produce the effects that had been most dreaded. Dr. Solander himself was the first who felt the inclination, against which he had warned others, irresistible; and insisted upon being suffered to lie down. Mr. Banks entreated and remonstrated in vain; down he lay upon the ground,

although it was covered with snow, and it was with great difficulty that his friend kept him from sleeping. Richmond, also, one of the black servants, began to linger, having suffered from the cold in the same manner as the Doctor. Mr. Banks, therefore, sent five of the company, among whom was Mr. Buchan, forward, to get a fire ready at the first convenient place they could find; and himself, with four others remained with the Doctor and Richmond, whom, partly by persuasion and entreaty, and partly by force, they brought on; but when they had got through the greatest part of the birch and swamp, they both declared they could go no farther. Mr. Banks again had recourse to entreaty and expostulation, but they produced no effect. When Richmond was told that, if he did not go on, he would in a short time be frozen to death, he answered, that he desired nothing but to lie down and die. The Doctor did not so explicitly renounce his life; he said he was willing to go on, but that he must first take some sleep, though he had before told the company, to sleep was to perish. Mr. Banks and the rest found it impossible to carry them; and there being no remedy, they were both suffered to sit down, being partly supported by the bushes; and in a few minutes they fell into a profound sleep. Soon after, some of the people who had been sent forward, returned, with the welcome news that a fire was kindled about a quarter of a mile farther on the way. Mr. Banks then endeavored to awake Dr. Solander, and happily succeed-

ed. But though he had not slept five minutes, he had almost lost the use of his limbs, and the muscles were so shrunk, that the shoes fell from his feet: he consented to go forward with such assistance as could be given him, but no attempts to relieve poor Richmond were successful."

It is hardly necessary to say any thing about the treatment of such cases. If a person is found in a state of torpor from cold, common sense points out the necessity of bringing him within the influence of warmth. When, however, the limbs, &c., are frost-bitten, heat must be very cautiously applied, lest reaction, ensuing in such debilitated parts, might induce gangrene. Brisk friction with a cold towel, or even with snow, as is the custom in Russia, should, in the first instance, be had recourse to. When by this means the circulation is restored, and motion and feeling communicated to the parts, the heat may be gradually increased, and the person wrapped in blankets, and allowed some stimulus internally, such as a little negus, or spirits and water. This practice should be adopted from the very first, when the parts are not frost-bitten; but when such is the case, the stimulating system requires to be used with great caution, and we must proceed carefully, proportioning the stimulus to the particular circumstances of the case.

If a person is unfortunate enough to be overtaken in a snow storm, and has no immediate prospect of extrication, he should, if the cold is

very great, and the snow deep, sink his body as much as possible in the latter, leaving only room for respiration. By this plan, the heat of the body is much better preserved than when exposed to the influence of the atmosphere, and life has a greater chance of being saved; for the temperature of the snow is not lower than that of the surrounding air, while its power of absorbing caloric is much less. It is on this principle that sheep live for such a length of time enveloped in snow wreaths, while, had they been openly exposed, for a much less period, to a similar degree of cold, death would inevitably have ensued.

One of the best methods to prevent the limbs from being frost-bitten in intensely cold weather, is to keep them continually in motion. Such was the method recommended by Xenophon to the Greek troops, in the memorable "Retreat of the Ten Thousand," conducted by that distinguished soldier and historian.

CHAPTER XIII.

TRANCE.

There is some analogy between suspended animation and sleep. It is not so striking, however, as to require any thing like a lengthened discussion of the former, which I shall only consider in so far as the resemblance holds good between it and sleep. I have already spoken of that suspension of the mind, and of some of the vital functions, which occurs in consequence of intense cold; but there are other varieties, not less singular in their nature. The principal of these are, fainting, apoplexy, hanging, suffocation, drowning, and, especially, trance. When complete fainting takes place, it has many of the characters of death—the countenance being pale, moist, and clammy; the body cold; the respiration extremely feeble; the pulsation of the heart apparently at an end; while the mind is in a state of utter abeyance. It is in the latter respect only, that the resemblance exists between syncope and sleep; in every other they are widely different. The same rule holds with regard to apoplexy, in which a total insensibility,

even to the strongest stimuli, takes place, accompanied also with mental torpor. In recoverable cases of drowning, hanging, and suffocation, a similar analogy prevails, only in a much feebler degree; the faculties of the mind being for the time suspended, and the actual existence of the vital spark only proved by the subsequent restoration of the individual to consciousness and feeling.

The most singular species, however, of suspended animation is that denominated catalepsy, or trance. No affection, to which the animal frame is subject, is more remarkable than this. During its continuance, the whole body is cold, rigid, and inflexible; the countenance without color; the eyes fixed and motionless; while breathing and the pulsation of the heart are, to all appearance, at an end. The mental powers, also, are generally suspended, and participate in the universal torpor which pervades the frame. In this extraordinary condition, the person may remain for several days, having all, or nearly all, the characteristics of death impressed upon him. Such was the case with the celebrated Lady Russel, who only escaped premature interment by the affectionate prudence of her husband; and other well authenticated instances of similar preservation from burying alive have been recorded.

The nature of this peculiar species of suspended animation, seems to be totally unknown; for there is such an apparent extinction of every faculty essential to life, that it is inconceivable how

existence should go on during the continuance of the fit. There can be no doubt, however, that the suspension of the heart and lungs is more apparent than real. It is quite certain that the functions of these organs must continue, so as to sustain life, although in so feeble a manner as not to come under the cognizance of our senses. The respiration, in particular, is exceedingly slight; for a mirror, held to the mouth of the individual, receives no tarnish whatever from his breath. One fact seems certain, that the functions of the nervous system are wholly suspended, with the exception of such a faint portion of energy, as to keep up the circulatory and respiratory phenomena: consciousness, in a great majority of cases, is abolished; and there is nothing wanting to indicate the unquestionable presence of death, but that decomposition of the body which invariably follows this state, and which never attends the presence of vitality.

The remote causes of trance are hidden in much obscurity; and, generally, we are unable to trace the affection to any external circumstance. It has been known to follow a fit of terror. Sometimes it ensues after hysteria, epilepsy, or other spasmodic diseases, and is occasionally an accompaniment of menorrhagia and intestinal worms. Nervous and hypochondriac patients are the most subject to its attacks; but sometimes it occurs when there is no disposition of the kind, and when

the person is in a state of the most seeming good health.

"A girl named Shorigny, about twenty-five years old, residing at Paris, had been for two years past subject to hysteria. On the twenty-eighth day after she was first attacked, the physician who came to visit her was informed that she had died during the night, which much surprised him, as when he had left her the night before, she was better than usual. He went to see her, in order to convince himself of the fact; and, on raising the cloth with which she was covered, he perceived that though her face was very pale, and her lips discolored, her features were not otherwise in the least altered. Her mouth was open, her eyes shut, and the pupils very much dilated; the light of the candle made no impression on them. There was no sensible heat in her body; but it was not cold and flabby like corpses in general. The physician returned the next day, determined to see her again before she was buried; and, finding that she had not become cold, he gave orders that the coffin should not be soldered down until putrefaction had commenced. He continued to observe her during five days, and at the end of that period, a slight movement was observed in the cloth which covered her. In two hours, it was found that the arm had contracted itself; she began to move; and it was clear that it had only been an apparent death. The eyes soon after were seen opened, the senses returned, and the girl began gradually to recover.

This is an extraordinary, but incontestible fact: the girl is still alive, and a great many persons who saw her while she was in the state of apathy described, are ready to satisfy the doubts of any one who will take the trouble to inquire."*

The case which follows is from the *Canton Gazette*, and is not less curious:—

"On the western suburbs of Canton, a person named Le, bought as a slave-woman a girl named Leaning. At the age of twenty-one, he sold her to be a concubine to a man named Wong. She had lived with him three years. About six months ago she became ill, in consequence of a large imposthume on her side, and on the 25th of the present moon died. She was placed in a coffin, the lid of which remained unfastened, to wait for her parents to come and see the corpse, that they might be satisfied she died a natural death. On the 28th, while carrying the remains to be interred in the north side of Canton, a noise or voice was heard proceeding from the coffin; and, on removing the covering, it was found the woman had come to life again. She had been supposed dead for three days."

The case of Colonel Townsend, however, is much more extraordinary than either of the above mentioned. This gentleman possessed the remarkable faculty of throwing himself into a trance at pleasure. The heart ceased, apparently, to

* Mentor.

throb at his bidding, respiration seemed at an end, his whole frame assumed the icy chill and rigidity of death; while his face became colorless and shrunk, and his eye fixed, glazed, and ghastly: even his mind ceased to manifest itself; for during the trance it was as utterly devoid of consciousness as his body of animation. In this state he would remain for hours, when these singular phenomena wore away, and he returned to his usual condition. Medical annals furnish no parallel to this extraordinary case. Considered whether in a physiological or metaphysical point of view, it is equally astonishing and inexplicable.

A variety of stories are related of people having had circumstances revealed to them in a trance, of which they were ignorant when awake: most of these tales have their origin in fiction, although there is no reason why they may not be occasionally true; as the mind, instead of being in torpor, as is very generally the case, may exist in a state analogous to that of dreaming, and may thus, as in a common dream, have long forgotten events impressed upon it.

The following case exhibits a very singular instance, in which the usual characteristic—a suspension of the mental faculties—was wanting. It seems to have been a most complete instance of suspended volition, wherein the mind was active, while the body refused to obey its impulses, and continued in a state of apparent death.

"A young lady, an attendant on the Princess

——, after having been confined to her bed, for a great length of time, with a violent nervous disorder, was at last, to all appearance, deprived of life. Her lips were quite pale, her face resembled the countenance of a dead person, and the body grew cold.

"She was removed from the room in which she died, was laid in a coffin, and the day of her funeral fixed on. The day arrived, and, according to the custom of the country, funeral songs and hymns were sung before the door. Just as the people were about to nail on the lid of the coffin, a kind of perspiration was observed to appear on the surface of her body. It grew greater every moment; and at last a kind of convulsive motion was observed in the hands and feet of the corpse. A few minutes after, during which time fresh signs of returning life appeared, she at once opened her eyes and uttered a most pitiable shriek. Physicians were quickly procured, and in the course of a few days she was considerably restored, and is probably alive at this day.

"The description which she gave of her situation is extremely remarkable, and forms a curious and authentic addition to psychology.

"She said it seemed to her, as if in a dream, that she was really dead; yet she was perfectly conscious of all that happened around her in this dreadful state. She distinctly heard her friends speaking and lamenting her death, at the side of her coffin. She felt them pull on the dead-clothes,

and lay her in it. This feeling produced a mental anxiety, which is indescribable. She tried to cry, but her soul was without power, and could not act on her body. She had the contradictory feeling as if she were in her body, and yet not in it, at one and the same time. It was equally impossible for her to stretch out her arm, or to open her eyes, or to cry, although she continually endeavored to do so. The internal anguish of her mind was, however, at its utmost height when the the funeral hymns began to be sung, and when the lid of the coffin was about to be nailed on. The thought that she was to be buried alive, was the one that gave activity to her soul, and caused it to operate on her corporeal frame."*

The following is different from either of the foregoing; I have given it on account of its singularity, although it does not altogether come under the denomination of-trance.

"George Grokatzhi, a Polish soldier, deserted from his regiment in the harvest of the year 1677. He was discovered, a few days after, drinking and making merry in a common ale-house. The moment he was apprehended, he was so much terrified, that he gave a loud shriek, and was immediately deprived of the power of speech. When brought to a court martial, it was impossible to make him articulate a word; nay, he then became as immovable as a statue, and appeared not to be

* "Psychological Magazine," vol. v. part iii. page 15.

conscious of any thing that was going forward. In the prison, to which he was conducted, he neither ate nor drank. The officers and priests at first threatened him, and afterwards endeavored to soothe and calm him, but all their efforts were in vain. He remained senseless and immovable. His irons were struck off, and he was taken out of the prison, but he did not move. Twenty days and nights were passed in this way, during which he took no kind of nourishment: he then gradually sunk and died."*

It would be out of place to enter here into a detail of the medical management of the first mentioned varieties of suspended animation, such as drowning, strangulation, &c., &c.; and with regard to the treatment of trance, properly so called, a very few words will suffice.

If we have reason to suppose that we know the cause of the affection, that, of course, must be removed whenever practicable. We must then employ stimuli to arouse the person from his torpor, such as friction, the application of sternutatories and volatile agents to the nostrils, and electricity. The latter remedy is likely to prove a very powerful one, and should always be had recourse to when other means fail. I should think the warm bath might be advantageously employed. When even these remedies do not succeed, we must trust to time. So long as the body does not run into

* Bonetus, "*Medic Septentrion.*" lib. i. sec. xvi. cap. 6.

decay, after a case of suspended animation arising without any very obvious cause, interment should not take place; for it is possible that life may exist, although, for the time being, there is every appearance of its utter extinction. By neglecting this rule, a person may be interred alive; nor can there be a doubt that such dreadful mistakes have occasionally been committed, especially in France, where it is customary to inter the body twenty-four hours after death. Decomposition is the only infallible mark that existence is at an end, and that the grave has triumphed.

CHAPTER XIV.

VOLUNTARY WAKING DREAMS.

The young and the imaginative are those who indulge most frequently in waking dreams. The scenes which life presents do not come up to the desires of the heart; and the pencil of fancy is accordingly employed in depicting others more in harmony with its own designs. Away into the gloomy back-ground goes reality with its stern and forbidding hues, and forward, in colors more dazzling than those of the rainbow, start the bright and airy phantoms of imagination. "How often," observes Dr. Good,* "waking to the roar of the midnight tempest, while dull and gluttonous indolence snores on in happy forgetfulness, does the imagination of those who are thus divinely gifted mount the dizzy chariot of the whirlwind, and picture evils that have no real existence; now figuring to herself some neat and thrifty cottage where virtue delights to reside, she sees it swept away in

* Book of Nature, vol. iii. p. 422.

a moment by the torrent, and despoiled of the little harvest just gathered in; now following the lone traveller in some narrow and venturous pathway, over the edge of the Alpine precipices, where a single slip is instant destruction, she tracks him alone by fitful flashes of lightning; and at length, struck by the flash, she beholds him tumbling headlong from rock to rock, to the bottom of the dread abyss, the victim of a double death. Or possibly she takes her stand on the jutting foreland of some bold terrific coast, and eyes the foundering vessel straight below; she mixes with the spent and despairing crew; she dives into the cabin, and singles out, perhaps from the rest, some lovely maid, who, in all the bloom of recovered beauty, is voyaging back to her native land from the healing airs of a foreign climate, in thought just bounding over the scenes of her youth, or panting in the warm embraces of a father's arms." Such are waking dreams; and there are few who, at some happy moment or other, have not yielded to their influence. Often under the burning clime of India, or upon the lonely banks of the Mississippi, has the stranger let loose the reins of his imagination, calling up before him the mountains of his own beloved country, his native streams, and rocks, and valleys, so vividly, that he was transported back into the midst of them, and lived over again the days of his youth. Or the waking dream may assume a more selfish character. If the individual pines after wealth, his mind may

be filled with visions of future opulence. If he is young and unmarried, he may conjure up the form of a lovely female, may place her in a beautiful cottage by the banks of some romantic stream, may love her with unfathomable affection, and become the fondest and most happy of husbands. The more completely a person is left to solitude, the more likely is his imagination to indulge in such fancies. We seldom build castles in the air in the midst of bustle, or when we have any thing else to think of. Waking dreams are the luxuries of an otherwise unemployed mind—the aristocratic indulgences of the intellect. As people get older and more conversant with life in all its diversified features, they are little inclined to indulge in such visions. They survey events with the eye of severe truth, amuse themselves with no impracticable notions of fancied happiness, and are inclined to take a gloomy, rather than a flattering, view of the future. With youthful and poetical minds, however, the case is widely different. Much of that portion of their existence, not devoted to occupation, is a constant dream. They lull themselves into temporary happiness with scenes which they know only to exist in their own imagination; but which are nevertheless so beautiful, and so much in harmony with every thing their souls desire, that they fondly clasp at the illusion, and submit themselves unhesitatingly to its spell.

These curious states of mind may occur at any time; but the most common periods of their acces-

sion are shortly after lying down, and shortly before getting up. Men, especially young men, of vivid, sanguine, imaginative temperaments, have dreams of this kind almost every morning and night. Instead of submitting to the sceptre of sleep, they amuse themselves with creating a thousand visionary scenes. Though broad awake, their judgment does not exercise the slightest sway, and fancy is allowed to become lord of the ascendant. Poets are notorious castle-builders, and poems are, in fact, merely waking dreams—at least their authors were under the hallucination of such dreams while composing. Milton's mind, during the composition of Paradise Lost, must have existed chiefly in the state of a sublime waking dream; so must Raphael's, while painting the Sistine Chapel; and, Thorwaldson's, while designing the triumphs of Alexander. In waking dreams, whatever emotion prevails has a character of exaggeration, at least in reference to the existing condition of the individual. He sees every thing through the serene atmosphere of imagination, and imbues the most trite circumstances with poetical coloring. The aspect, in short, which things assume, bears a strong resemblance to that impressed upon them by ordinary dreams, and differs chiefly in this, that, though verging continually on the limits of extravagance, they seldom transcend possibility.

CHAPTER XV.

SPECTRAL ILLUSIONS.

Of the various faculties with which man is endowed, those which bring him into communication with the material world, constitute an important class. The organs of these faculties—termed perceptive—are situated in the middle and lower parts of the forehead. Their function is to perceive and remember the existence, phenomena, qualities, and relations of external objects. *Individuality* takes cognizance of the existence of material bodies; *Eventuality*, of their motions or actions; *Form*, of their shape; *Size*, of their magnitude and proportions; *Weight*, of the resistance which they offer to a moving or restraining power; *Coloring*, of their colors; and *Locality*, of their relative position. *Time* and *Number* perceive and remember duration and numbers; *Language* takes cognizance of artificial signs of feeling and thought; and *Order* delights in regularity and arrangement. In ordinary circumstances, the mode of action of these organs is this. If any object—a horse for example—be placed be-

fore us, the rays of light reflected from its surface to our eye, form a picture of the animal upon the retina or back part of that organ. This picture gives rise to what, for want of more precise language, is called an impression, which is conveyed by the optic nerve to the cerebral organs already mentioned; and by them, in reality, the horse is perceived. The eye and optic nerve, it will be observed, do no more than transmit the impression from without, so as to produce that state of the internal organs which is accompanied by what is termed perception or *sensation.* When the horse is withdrawn, the impression still remains, to a certain extent, in the brain; and though the animal is not actually perceived, we still remember its appearance, and can almost imagine that it is before us. This faint semi-perception is called an *idea*, and differs from sensation only in being less vivid. The brain is more highly excited when it perceives a sensation, than when an idea only is present; because, in the former case, there is applied, through the medium of the senses, a stimulus from without, which, in the latter case, is not present. If, however, the brain be brought by *internal* causes to a degree of excitement, which, in general, is the result only of external impressions, ideas not less vivid than sensations ensue; and the individual has the same consciousness as if an impression were transmitted from an actual object through the senses. In other words, the brain, in a certain state, perceives external bodies;

and any cause which induces that state, gives rise to a like perception, independently of the usual cause — the presence of external bodies themselves. The chief of these internal causes is inflammation of the brain; and when the organs of the perceptive faculties are so excited — put into a state similar to that which follows actual impressions from without — the result is a series of false images or sounds, which are often so vivid as to be mistaken for realities. During sleep, the preceptive organs seem to be peculiarly susceptible of such excitement. In dreaming, for instance, the external world, is inwardly represented to our minds with all the force of reality: we speak and hear as if we were in communication with actual existences. Spectral illusions are phenomena strictly analogous; indeed, they are literally nothing else than involuntary waking dreams.

In addition to the occasional cause of excitement of the perceptive organs above alluded to, there is another, the existence of which is proved by numerous facts, though its mode of action is somewhat obscure. I allude to a large development of the organ of *Wonder*. Individuals with such a development are both strongly inclined to believe in the supernaturality of ghosts, and peculiarly liable to be visited by them. This organ is large in the head of Earl Grey, and he is said to be haunted by the apparition of a bloody head. Dr. Gall mentions, that in the head of Dr. Jung Stilling, who saw visions, the organ was very

largely developed. A gentleman who moves in the best society in Paris, once asked Gall to examine his head. The doctor's first remark was, "You sometimes see visions, and believe in apparitions." The gentleman started from his chair in astonishment, and said that he *had* frequent visions: but never till that moment had he spoken on the subject to any human being, through fear of being set down as absurdly credulous. How a large development of *Wonder* produces the necessary excitement of the perceptive organs is unknown, but the fact seems indisputable.

In former times, individuals who beheld visions, instead of ascribing them to a disordered state of the brain, referred them to outward impressions, and had a false conviction of the presence of supernatural beings. Hence the universal belief in ghosts which in these periods prevailed, even among the learned, and from which the illiterate are not yet entirely exempt.

We read in history of people being attended by familiar spirits; such was the case with Socrates in ancient, and with the poet Tasso, in modern times: their familiar spirits were merely spectral illusions. "At Bisaccio, near Naples," says Mr. Hoole, in his account of the illustrious author of the Jerusalem Delivered, "Manso had an opportunity of examining the singular effects of Tasso's melancholy, and often disputed him concerning a *familiar spirit* which he pretended conversed with him: Manso endeavored in vain to persuade his

friend that the whole was the illusion of a disturbed imagination; but the latter was strenuous in maintaining the reality of what he asserted, and to convince Manso, desired him to be present at one of the mysterious conversations. Manso had the complaisance to meet him next day, and while they were engaged in discourse, on a sudden he observed that Tasso kept his eyes fixed on a window, and remained in a manner immovable: he called him by his name, but received no answer; at last Tasso cried out, 'There is the friendly spirit that is come to converse with me; look! and you will be convinced of all I have said.'

Manso heard him with surprise; he looked, but saw nothing except the sunbeams darting through the window; he cast his eyes all over the room, but could perceive nothing; and was just going to ask where the pretended spirit was, when he heard Tasso speak with great earnestness, sometimes putting questions to the spirit, sometimes giving answers; delivering the whole in such a pleasing manner, and in such elevated expressions, that he listened with admiration, and had not the least inclination to interrupt him. At last the uncommon conversation ended with the departure of the spirit, as appeared by Tasso's own words, who, turning to Manso, asked him if his doubts were removed. Manso was more amazed than ever; he scarce knew what to think of his friend's situation, and waived any farther conversation on the subject."

The visions of angels, and the communications from above, with which religious enthusiasts are often impressed, arise from the operation of spectral illusions. They see forms and hear sounds which have no existence; and, believing in the reality of such impressions, consider themselves highly favored by the Almighty. These feelings prevailed very much during the persecutions in Scotland. Nothing was more common than for the Covenanter by the lonely hill side to have what he supposed a special message from God, and even to see the angel who brought it, standing before him, and encouraging him to steadfastness in his religious principles. Much of the crazy fanaticism exhibited by the disciples of Campbell and Irving, undoubtedly arises from a similar cause; and it is probable that both of these individuals see visions and hear supernatural voices, as well as many of their infatuated followers.

Various causes may so excite the brain as to produce these phantasmata, such as great mental distress, sleeplessness, nervous irritation, religious excitement, fever, epilepsy, opium, delirium tremens, excessive study, and dyspepsia. I have known them to arise without the apparent concurrence of any mental or bodily distemper. I say *apparent*, for it is very evident there must be some functional derangement, however much it may be hidden from observation. An ingenious friend has related to me a case of this kind which occurred in his own person. One morning, while lying in

bed broad awake, and, as he supposed, in perfect health, the wall opposite to him appeared to open at its junction with the ceiling, and out of the aperture came a little uncouth, outlandish figure, which descended from the roof, squatted upon his breast, grinned at him maliciously, and seemed as if pinching and pummelling his sides. This illusion continued for some time, and with a timorous subject might have been attended with bad consequences ; but he referred it at once to some disordered state of the stomach under which he imagined he must have labored at the time, although he had no direct consciousness of any such derangement of this organ. The same gentleman has related to me the case of one of his friends which attracted much notice at the time it happened, from the melancholy circumstances that attended it. It is an equally marked instance of hallucination arising without the individual being conscious of any physical cause by which it might be occasioned. It is as follows :—

Mr. H. was one day walking along the street, apparently in perfect health, when he saw, or supposed he saw his acquaintance, Mr. C., walking before him. He called aloud to the latter, who, however, did not seem to hear him, but continued moving on. Mr. H. then quickened his pace for the purpose of overtaking him ; the other increased his also, as if to keep ahead of his pursuer, and proceeded at such a rate that Mr. H. found it impossible to make up to him. This continued for

some time, till, on Mr. C. coming to a gate he opened it, passed in, and slammed it violently in Mr. H.'s face. Confounded at such treatment, the latter instantly opened the gate, looked down the long lane into which it led, and, to his astonishment, no one was visible. Determined to unravel the mystery, he went to Mr. C.'s house; and what was his surprise when he learned that he was confined to bed, and had been so for several days. A week or two afterwards, these gentlemen chanced to meet in the house of a common friend, when Mr. H. mentioned the circumstance, and told Mr. C. jocularly that he had seen his *wraith*, and that, as a natural consequence, he would soon be a dead man. The person addressed laughed heartily, as did the rest of the company, but the result turned out to be no laughing matter; for, in a very few days, Mr. C. was attacked with putrid sore throat, and died; and within a very short period of his death Mr. H. was also in the grave.

Some of the most vivid instances of spectral illusion are those induced by opium. Several of the "English Opium-Eater's" visions were doubtless of this nature. Dr. Abercrombie relates a striking instance of the kind which occurred to the late Dr. Gregory. "He had gone to the north country by sea to visit a lady, a near relation, in whom he felt deeply interested, and who was in an advanced state of consumption. In returning from the visit, he had taken a moderate dose of laudanum, with the view of preventing sea-sickness,

and was lying on a couch in the cabin, when the figure of the lady appeared before him in so distinct a manner that her actual presence could not have been more vivid. He was quite awake, and fully sensible that it was a phantasm produced by the opiate, along with his intense mental feeling; but he was unable by any effort to banish the vision."* Indeed, any thing on which the mind dwells excessively may, by exciting the perceptive organs, give rise to spectral illusions. It is to this circumstance that the bereaved husband sees the image of a departed wife, to whom he was fondly attached — that the murderer is haunted by the apparition of his victim — and that the living with whom we are familiar, seem to be presented before our eyes, although at a distance from us. Dr. Conolly relates the case of a gentleman, who, when in danger of being wrecked near the Eddystone lighthouse, saw the images of his whole family.

These illusive appearances sometimes occur during convalescence from diseases. In the summer of 1832, a gentleman in Glasgow, of dissipated habits, was seized with cholera, from which he recovered. His recovery was unattended with any thing particular, except the presence of phantasmata — consisting of human figures about three feet high, neatly dressed in pea-green jackets, and knee-breeches of the same color. Being a person

* Inquiries concerning the Intellectual Powers, p. 357.

of a superior mind, and knowing the cause of the illusions, they gave him no alarm, although he was very often haunted by them. As he advanced in strength the phantoms appeared less frequently, and diminished in size, till at last they were not taller than his finger. One night, while seated alone, a multitude of these Lilliputian gentlemen made their appearance on his table, and favored him with a dance; but being at the time otherwise engaged, and in no mood to enjoy such an amusement, he lost temper at the unwelcome intrusion of his pigmy visiters, and striking his fist violently upon the table, he exclaimed in a violent passion, "Get about your business you little impertinent rascals! What the devil are you doing here?" when the whole assembly instantly vanished, and he was never troubled with them more.

It generally happens that the figures are no less visible when the eyes are closed than when they are open. An individual in the west of Scotland, whose case is related in the Phrenological Journal,* whenever he shut his eyes or was in darkness, saw a procession move before his mind as distinctly as it had previously done before his eyes. Some years ago, a farmer from the neighborhood of Hamilton, informed me, with feelings of great horror, that he had frequently the vision of a hearse drawn by four black horses, which

* Vol. ii. p. 111.

were driven by a black driver. Not knowing the source of this illusion he was rendered extremely miserable by it; and, to aggravate his unhappiness, was regarded by the ignorant country people, to whom he told his story, as having been guilty of some grievous crime. This vision was apparent to him chiefly by night, and the effect was the same whether his eyes were open or shut. Indeed, so little are these illusions dependant on sight, that the blind are frequently subject to them. A respected elderly gentleman, a patient of my own, who was afflicted with loss of sight, accompanied by violent headaches, and severe dispeptic symptoms, used to have the image of a black cat presented before him, as distinctly as he could have seen it before he became blind. He was troubled with various other spectral appearances, besides being subject to illusions of sound equally remarkable; for he had often the consciousness of hearing music so strongly impressed upon him, that it was with difficulty his friends could convince him it was purely ideal.

Considering the age in which Bayle lived, his notions of the true nature of spectral illusions were wonderfully acute and philosophical. Indeed, he has so well described the theory of apparitions, that the modern phrenological doctrine on this point seems little more than an expanded version of his own. "A man," says he, "would not only be very rash, but also very extravagant, who should pretend to prove that there never was any

person that imagined he saw a spectre; and I do not think that the most obstinate and extravagant unbelievers have maintained this. All they say, comes to this: that the persons who have thought themselves eye-witnesses of the apparition of spirits had a disturbed imagination. They confess that there are *certain places in our brain* that, being affected in a certain manner, *excite the image of an object which has no real existence out of ourselves*, and make the man, whose brain is thus modified, believe he sees, at two paces distant, a frightful spectre, a hobgoblin, a threatening phantom. The like happens in the heads of the most incredulous, either in their sleep, or in the paroxysms of a violent fever. Will they maintain after this, that it is impossible for a man awake, and not in a delirium, to receive, *in certain places of his brain, an impression* almost like that which, by the law of nature, is connected with the appearance of a phantom." In one of Shenstone's Essays, entitled "An Opinion of Ghosts," the same theory is clearly enunciated.

It is worthy of remark, that the phenomena of apparitions are inconsistent with the prevalent theory that the brain is a single organ, with every part of which each faculty is connected. Were this theory sound, the same cause that vivifies the perceptive faculties must also vivify, or excite to increased action, the propensities, sentiments, and reflecting powers. This, however, is by no means the case.

The case of Nicolai, the Prussian bookseller, which occurred in the beginning of 1791, is one of the most remarkable instances of spectral illusion on record. "I saw," says he, "in a state of mind completely sound, and—after the first terror was over—with perfect calmness, for nearly two months, almost constantly and involuntarily, a vast number of human and other forms, and even heard their voices, though all this was merely the consequence of a diseased state of the nerves, and an irregular circulation of the blood." "When I shut my eyes, these phantasms would sometimes vanish entirely, though there were instances when I beheld them with my eyes closed; yet when they disappeared on such occasions, they generally returned when I opened my eyes. I conversed sometimes with my physician and my wife of the phantasms which at the moment surrounded me; they appeared more frequently walking than at rest; nor were they constantly present. They frequently did not come for some time, but always reappeared for a longer or shorter period either singly or in company, the latter, however, being most frequently the case. I generally saw human forms of both sexes; but they usually seemed not to take the smallest notice of each other, moving as in a market-place, where all are eager to press through the crowd; at times, however, they seemed to be transacting business with each other. I also saw, several times, people on horseback, dogs, and birds. All these phantasms appeared to me in their naural

size, and as distinct as if alive, exhibiting different shades of carnation in the uncovered parts, as well as in different colors and fashions in their dresses, though the colors seemed somewhat paler than in real nature; none of the figures appeared particularly terrible, comical, or disgusting, most of them being of an indifferent shape, and some presenting a pleasing aspect."

Perhaps the most remarkable visionary, of whom we have any detailed account, was Blake the painter. This extraordinary man not only believed in his visions, but could often call up at pleasure whatever phantasms he wished to see; and so far from their being objects of annoyance, he rather solicited than wished to avoid their presence. He was in the habit of conversing with angels, demons, and heroes, and taking their likenesses; for they proved most obedient sitters, and never showed any aversion to allow him to transfer them to paper. "His mind;" says Mr. Cunningham, "could convert the most ordinary occurrences into something mystical and supernatural." "'Did you ever see a fairy's funeral, Madam?' he once said to a lady who happened to sit by him in company, 'Never, Sir!' was the answer. 'I have,' said Blake, 'but not before last night. I was walking alone in my garden, there was great stillness among the branches and flowers, and more than common sweetness in the air; I heard a low and pleasant sound, and knew not whence it came. At last I saw the broad leaf of a flower move, and

underneath I saw a procession of creatures of the size and color of green and grey grasshoppers, bearing a body laid out on a rose leaf, which they buried with songs, and then disappeared. It was a fairy funeral.'" On being asked to draw the likeness of Sir William Wallace, that hero immediately stood before him, and he commenced taking his portrait. "Having drawn for some time with the same care of hand and steadiness of eye, as if a living sitter had been before him, Blake stopped suddenly and said, 'I cannot finish him—Edward the First has stepped in between him and me.' 'That's lucky,' said his friend, 'for I want the portrait of Edward too.' Blake took another sheet of paper and sketched the features of Plantagenet; upon which his majesty politely vanished, and the artist finished the head of Wallace."* The greater part of his life was passed in beholding visions and in drawing them. On one occasion he saw the ghost of a flea and took a sketch of it. No conception was too strange or incongruous for his wild imagination, which totally overmastered his judgment, and make him mistake the chimeras of an excited brain for realities.

What is called the *Second Sight* originated, in most cases, from spectral illusions; and the seers of whom we so often read, were merely individuals visited by these phantoms. The Highland

* Cunningham's Lives of the British Painters, Sculptors, and Architects, vol. ii., Life of Blake.

mountains, and the wild lawless habits of those who inhabited them, were peculiarly adapted to foster the growth of such impressions in imaginative minds; and, accordingly, nothing was more common than to meet with persons who not only fancied they saw visions, but, on the strength of this belief, laid claim to the gift of prophecy. The more completely the mind is abstracted from the bustle of life; the more solitary the district in which the individual resides; and the more romantic and awe-inspiring the scenes that pass before his eyes, the greater is his tendency to see visions, and to place faith in what he sees. A man, for instance, with the peculiar temperament which predisposes to see, and believe in, spectral illusions, is informed that his chieftain and clan have set out on a dangerous expedition. Full of the subject, he forces their images before him—sees them engaged in fight—beholds his chieftain cut down by the claymore of an enemy—the clansmen routed and dispersed, their houses destroyed, their cattle carried off. This vision he relates to certain individuals. If, as is not unlikely, it is borne out by the event, his prophecy is spread far and wide, and looked upon as an instance of the second sight; while, should nothing happen, the story is no more thought of by those to whom it was communicated. In some instances, it is probable that the accidental fulfilment of an ordinary dream was regarded as Second Sight.

The belief in fairies, no doubt, had also its ori-

gin in spectral illusions. In the days of ignorance and superstition nothing was more easy than for an excited brain to conjure up those tiny forms, and see them perform their gambols upon the greensward beneath the light of the moon.

The dimensions of the figures which are exhibited in spectral illusions vary exceedingly. Sometimes they appear as miniatures, sometimes of the size of life, at other times of colossal proportions. The same differences apply to their color. In one case they are pale, misty, transparent; in another black, red, blue, or green. Sometimes we have them fantastically clothed in the costume of a former age, sometimes in that of our own. Now they are represented grinning, now weeping, now in smiles. "White or grey ghosts," says Mr. Simpson, "result from excited *Form*, with quiescent *Coloring*, the transparent cobweb effect being colorless. Pale spectres, and shadowy yet colored forms, are the effect of partially excited *Coloring*. Tall ghosts and dwarf goblins, are the illusions of over-excited *Size*." The jabbering of apparitions arises from an excited state of that part of the brain which gives us cognizance of sounds. This explanation seems highly probable, or rather quite satisfactory. There are points, however, which it is likely no one will ever be able to explain. Why, for instance, should the disordered brain conjure up *persons* and *faces* rather than *trees* and *houses*? why should a ghost be dressed in *red* rather than *blue*, and why should it *smile* rather than *grin*?

These are minutiæ beyond the reach of investigation, at least in the present state of our knowledge.

Mr. Simpson, in the second volume of the Phrenological Journal, has published a case of spectral illusion, which, for singularity and interest, equals any thing of the same kind which has hitherto been recorded. The subject of it was a young lady under twenty years of age, of good family, well educated, free from any superstitious fears, in perfect bodily health and of sound mind. She was early subject to occasional attacks of such illusions, and the first she remembered was that of a carpet which descended in the air before her, then vanished away. After an interval of some years, she began to see human figures in her room as she lay wide awake in bed. These figures were *whitish* or rather *grey*, and *transparent* like *cobweb*, and generally above the size of life. At this time she had acute headaches, very singularly confined to one small spot of the head. On being asked to indicate the spot, she touched, with her fore-finger and thumb, each side of the root of the nose, the commencement of the eyebrows, and the spot immediately over the top of the nose, the ascertained seats of *Form*, *Size*, and *Lower Individuality*. On being asked if the pain was confined to these spots, she answered that some time afterwards it extended to the right and left, along the eyebrows, and a little above them, and completely round the eyes, which felt as if they would burst

from their sockets. On this taking place the visions varied. The organs of *Weight*, *Coloring*, *Order*, *Number*, and *Locality*, were affected, and the phantasmata assumed a change corresponding to the irritated condition of these parts. "The whitish or cobweb spectres assumed the natural *color* of the objects, but they continued often to present themselves, though not always, above the *size* of life." "*Coloring* being over-excited, began to occasion its specific and fantastical illusions. Bright spots, like stars on a back ground, filled the room in the dark, and even in day-light; and sudden, and sometimes gradual, illumination of the room during the night took place, so that the furniture in it became visible. Innumerable balls of fire seemed one day to pour like a torrent out of one of the rooms of the house down the staircase. On one occasion, the pain between the eyes, and along the lower ridge of the brow, struck her suddenly with great violence—when, *instantly*, the room filled with stars and bright spots. On attempting, on that occasion, to go to bed, she said she was conscious of an *inability to balance herself, as if she had been tipsy*, and she fell, having made repeated efforts to seize the bed-post; which, in the most unaccountable manner eluded her grasp *by shifting its place*, and also by presenting her with *a number of bed-posts instead of one.* If the organ of *Weight*, situated between *Size* and *Coloring*, be the organ of the instinct to preserve, and power of preserving equilibrium, it

must be the necessary consequence of the derangement of that organ to overset the balance of the person. Over-excited *Number* we should expect to produce multiplication of objects, and the first experience she had of this illusion, was the multiplication of the bed-posts, and subsequently of any inanimate object she looked at."

"For nearly two years, Miss S. L. was free from her frontal headaches, and—mark the coincidence—untroubled by visions or any other illusive perceptions. Some months ago, however, all her distressing symptoms returned in great aggravation, when she was conscious of a want of health. The pain was more acute than before along the frontal bone, and round and in the eyeballs; and all the organs there situated recommenced their game of illusion. Single figures of absent and deceased friends were terribly real to her, both in the day and in the night, sometimes *cobweb*, but generally colored. She sometimes saw friends on the street, who proved phantoms when she approached to speak to them; and instances occurred, where, from not having thus satisfied herself of the illusion, she affirmed to such friends that she had seen them in certain places, at certain times, when they proved to her the clearest *alibi*. The *confusion* of her spectral forms now distressed her.—(*Order* affected.) The oppression and perplexity were intolerable, when figures presented themselves before her in inextricable disorder, and still more when they changed—as with Nicolai—from whole fi-

gures to parts of figures—faces and half faces, and limbs—sometimes of inordinate size and dreadful deformity. One instance of illusive *Disorder*, which she mentioned, is curious; and has the farther effect of exhibiting (what cannot be put in terms except those of) the derangement of the just perception of gravitation or equilibrium. (*Weight.*) One night as she sat in her bed-room, and was about to go to bed, a *stream* of spectres, persons' faces, limbs, in the most shocking confusion, seemed to her to pour into her room from the window, in the manner of a cascade! Although the cascade continued, apparently, in rapid descending motion; there was no accumulation of figures in the room, the supply unaccountably vanishing, after having formed the cascade. *Colossal* figures are her frequent visiters. (*Size.*)"

In the fifth volume of the Phrenological Journal, page 319, a case is mentioned where the patient was tortured with horrid faces glaring at her, and approaching close to her in every possible aggravation of horror. "She was making a tedious recovery in child-bed when these symptoms troubled her. Besides the forms, which were of natural color, though often bloody, she was perplexed by their variation in size, from colossal to minute. She saw also entire human figures, but they were always as minute as pins, or even pin-heads, and were in great confusion and numbers." "She described the pain which *accompanied* her illusions, viz. acute pain in the upper part or root of the

nose, the seat of the organ of *Form*, and all along the eyebrows, which takes in *Individuality*, *Form*, *Size*, *Weight*, *Coloring*, *Order* and *Number*." In the same volume, page 430, Mr. Levison relates, that on asking an individual who saw apparitions, whether or not he felt pain at any part of his head, he answered, "that every time before he experienced this peculiar power of seeing figures, he invariably felt pain in and between his eyes, and, in short, all over the eyebrows." It does not appear, however, that pain is universally felt in such cases in the lower part of the forehead. Dr. Andrew Combe informs me that, so far as he has observed, the pain, when it does exist, is more frequently in the exciting organ, generally *Wonder*.

Spectral illusions constitute the great pathognomonic sign of delirium tremens. In this disease they are usually of a horrible, a disgusting, or a frightful nature; the person being irresistibly impressed with the notion that reptiles, insects, and all manner of vermin are crawling upon him, which he is constantly endeavoring to pick off—that he is haunted by hideous apparitions—that people are in the room preparing to murder and rob him, and so forth. In the following case, with which I have been favored by Dr. Combe, the illusive appearances were of a more pleasing kind than generally happen. "In a case," says he, "of delirium tremens in an inn-keeper, about whom I was consulted, the spectral illusions continued several days, and had a distinct reference to a large

and active cerebellum, (the organ of *Amativeness*) conjoined with *Wonder*. The man refused to allow me to look at a blister which had been placed between his shoulders, 'because he could not take off his coat *before the ladies who were in the room!* When I assured him that there was nobody in the room, he smiled at the joke, as he conceived it to be, and, in answer to my questions, described them as several in number, well dressed, and good-looking. At my request he rose up to shake hands with them, and was astonished at finding them elude his grasp, and his hand strike the wall. This, however, convinced him that it was an illusion, and he forthwith took off his coat, but was unwilling to converse longer on the subject. In a few days the ladies vanished from his sight."

Spectral illusions are more frequently induced by fever than by any other cause. Indeed, the premonitory stages of most fevers are accompanied by illusive appearances of one kind or another, such as luminous bodies, especially when the eyes are shut, hideous faces, streaks of fire, &c.; and in the advanced stages, they are not uncommon. A medical friend has informed me, that when ill of fever in Portugal, he was terribly harrassed by the vision of a soldier, whose picture was hanging in the room. Removing the picture failed to dissipate the illusion, which did not disappear till he was conveyed to another apartment. Dr. Bostock, while under a febrile attack, was visited by spectral illusions of an unusual kind. The following

are the particulars of his case, as described by himself:—

"I was laboring," says he, "under a fever, attended with symptoms of general debility, especially of the nervous system, and with a severe pain of the head, which was confined to a small spot situated above the right temple. After having passed a sleepless night, and being reduced to a state of considerable exhaustion, I first perceived figures presenting themselves before me, which I immediately recognised as similar to those described by Nicolai, and upon which, as I was free from delirium, and as they were visible about three days and nights with little intermission, I was able to make my observations. There were two circumstances which appeared to me very remarkable; first, that the spectral appearances always followed the motion of the eyes; and, secondly, that the objects which were the best defined and remained the longest visible, were such as I had no recollection of ever having previously seen. For about twenty-four hours I had constantly before me a human figure, the features and dress of which were as distinctly visible as that of any real existence, and of which, after an interval of many years, I still retain the most lively impression; yet, neither at the time nor since have I been able to discover any person whom I had previously seen who resembled it.

"During one part of this disease, after the disappearance of this stationary phantom, I had a

very singular and amusing imagery presented to me. It appeared as if a number of objects, principally human faces or figures on a small scale, were placed before me, and gradually removed like a succession of medallions. They were all of the same size, and appeared to be all situated at the same distance from the face. After one had been seen for a few minutes, it became fainter, and then another, which was more vivid, seemed to be laid upon it or substituted in its place, which, in its turn, was superseded by a new appearance. During all this succession of scenery, I do not recollect that, in a single instance, I saw any object with which I had been previously acquainted, nor, as far as I am aware, were the representations of any of those objects, with which my mind was the most occupied at other times, presented to me; they appeared to be invariably new creations, or, at least, new combinations of which I could not trace the original materials." *

The following very curious instance, is not less interesting: the subject of it was a member of the English bar.

"In December, 1823, A. was confined to his bed by inflammation of the chest, and was supposed by his medical attendant to be in considerable danger. One night, while unable to sleep from pain and fever, he saw, sitting on a chair, on the left side of his bed, a female figure which he imme-

* Bostock's Physiology, vol. iii. p. 204.

diately recognised to be that of a young lady who died about two years before. His first feeling was surprise, and perhaps a little alarm; his second, that he was suffering from delirium. With this impression, he put his head under the bed-clothes, and, after trying in vain to sleep, as a test of the soundness of his mind, he went through a long and complicated process of metaphysical reasoning. He then peeped out and saw the figure in the same situation and position. He had a fire, but would not allow a candle or nurse in the room. A stick was kept by his side to knock for the nurse when he required her attendance. Being too weak to move his body, he endeavored to touch the figure with the stick, but, on a real object being put upon the chair, the imaginary one disappeared, and was not visible again that night.

"The next day he thought of little but the vision, and expected its return without alarm, and with some pleasure. He was not disappointed. It took the same place as before, and he employed himself in observations. When he shut his eyes or turned his head, he ceased to see the figure; by interposing his hand he could hide part of it; and it was shown, like any mere material substance, by the rays of the fire which fell upon and were reflected from it. As the fire declined it became less perceptible, and as it went out, invisible. A similar appearance took place on several other

nights; but it became less perceptible, and its visits less frequent, as the patient recovered from his fever.

"He says the impressions on his mind were always pleasing, as the spectre looked at him with calmness and regard. He never supposed it real; but was unable to account for it on any philosophical principles within his knowledge.

"In the autumn of 1825, A.'s health was perfectly restored, and he had been free from any waking vision for nearly eighteen months. Some circumstances occurred which produced in him great mental excitement. One morning he dreamed of the figure, which stood by his side in an angry posture, and asked for a locket which he usually wore. He awoke and saw it at the toilet, with the locket in its hand. He rushed out of bed and it instantly disappeared. During the next six weeks its visits where incessant, and the sensations which they produced where invariably horrible. Some years before, he had attended the dissection of a woman in a state of rapid decomposition. Though much disgusted at the time, *the subject* had been long forgotten; but was recalled by the union of its putrescent body with the spectre's features. The visits where not confined to the night, but frequently occurred while several persons where in the same room. They were repeated at intervals during the winter; but he was able to get rid of them by moving or sitting *in an*

erect position. Though well, his pulse was hard, and generally from 90 to 100."*

In March, 1829, during an attack of fever, accompanied with violent action in the brain, I experienced illusions of a very peculiar kind. They did not appear except when the eyes were shut or the room perfectly dark; and this was one of the most distressing things connected with my illness; for it obliged me either to keep my eyes open or to admit more light into the chamber than they could well tolerate. I had the consciousness of shining and hideous faces grinning at me in the midst of profound darkness, from which they glared forth in horrid and diabolical relief. They were never stationary, but kept moving in the gloomy back ground: sometimes they approached within an inch or two of my face: at other times, they receded several feet or yards from it. They would frequently break into fragments, which after floating about would unite—portions of one face coalescing with those of another, and thus forming still more uncouth and abominable images. The only way I could get rid of those phantoms was by admitting more light into the chamber and opening the eyes, when they instantly vanished; but only to reappear when the room was darkened or the eyes closed. One night, when the fever was at its height, I had a splendid vision of a theatre, in the arena of which Ducrow, the celebrated

* Phrenological Journal, vol. v. p. 210.

equestrian, was performing. On this occasion, I had no consicousness of a dark back ground like to that on which the monstrous images floated; but every thing was gay, bright, and beautiful. I was broad awake, my eyes were closed, and yet I saw with perfect distinctness the whole scene going on in the theatre—Ducrow performing his wonders of horsemanship—and the assembled multitude, among whom I recognized several intimate friends; in short, the whole process of the entertainment as clearly as if I were present at it. When I opened my eyes, the whole scene vanished like the enchanted palace of the necromancer; when I closed them, it as instantly returned. But though I could thus dissipate the spectacle, I found it impossible to get rid of the accompanying music. This was the grand march in the Opera of Aladdin, and was performed by the orchestra with more superb and imposing effect, and with greater loudness, than I ever heard it before; it was executed, indeed, with tremendous energy. This air I tried every effort to dissipate, by forcibly endeavoring to call other tunes to mind, but it was in vain. However completely the vision might be dispelled, the music remained in spite of every effort to banish it. During the whole of this singular state, I was perfectly aware of the illusiveness of my feelings, and, though laboring under violent headache, could not help speculating upon them and endeavoring to trace them to their proper cause. This theatrical vision continued for

about five hours; the previous delusions for a couple of days. The whole evidently proceeded from such an excited state of some parts of the brain, as I have already alluded to. *Ideality*, *Wonder*, *Form*, *Color*, and *Size*, were all in intensely active operation, while the state of the reflecting organs was unchanged. Had the latter participated in the general excitement, to such an extent as to be unable to rectify the false impressions of the other organs, the case would have been one of pure delirium.

Spectral illusions can only be cured by removing the causes which give rise to them. If they proceed from the state of the stomach, this must be rectified by means of purgatives and alterative medicines. Should plethora induce them, local or general blood-letting and other antiphlogistic means are requisite. If they accompany fever or delirium tremens, their removal will, of course, depend upon that of these diseaes. Arising from sleeplessness, they will sometimes be cured by anodynes; and from nervous irritation, by the shower-bath and tonics. Where they seem to arise without any apparent cause, our attention should be directed to the state of the bowels, and blood-letting had recourse to.

CHAPTER XVI.

REVERIE.

A STATE of mind somewhat analogous to that which prevails in dreaming, also takes place during reverie. There is the same want of balance in the faculties, which are almost equally ill regulated, and disposed to indulge in similar extravagancies. Reverie proceeds from an unusual quiescence of the brain, and inability of the mind to direct itself strongly to any one point: it is often the prelude of sleep. There is a defect in the *attention*, which, instead of being fixed on one subject, wanders over a thousand, and even on these is feebly and ineffectively directed. We sometimes see this while reading, or, rather, while attempting to read. We get over page after page, but the ideas take no hold whatever upon us; we are in truth ignorant of what we peruse, and the mind is either an absolute blank, or vaguely addressed to something else. This feeling every person must have occasionally noticed in taking out his watch, looking at it, and replacing it without knowing what the hour was. In like manner he

may hear what is said to him without attaching any meaning to the words, which strike his ear, yet communicate no definite idea to the sensorium. Persons in this mood may, from some ludicrous ideas flashing across them, burst into a loud fit of laughter during sermon or at a funeral, and thus get the reputation of being either grossly irreverent or deranged. That kind of reverie in which the mind is nearly divested of all ideas, and approximates closely to the state of sleep, I have sometimes experienced while gazing long and intently upon a river. The thoughts seem to glide away, one by one, upon the surface of the stream, till the mind is emptied of them altogether. In this state we see the glassy volume of the water moving past us, and hear its murmur, but lose all power of fixing our attention definitively upon any subject: and either fall asleep, or are aroused by some spontaneous reaction of the mind, or by some appeal to the senses sufficiently strong to startle us from our reverie. Grave, monotonous, slowly-repeated sounds—as of a mill, a waterfall, an Eolian harp, or the voice of a dull orator, have the effect of lulling the brain into repose, and giving rise to a pleasing melancholy, and to calmness and inanity of mind. Uniform gentle motions have a tendency to produce a similar state of reverie, which is also very apt to ensue in the midst of perfect silence: hence, in walking alone in the country, where there is no sound to distract our meditations, we frequently get into this state. It is also apt to

take place when we are seated without books, companions, or amusement of any kind, by the hearth on a winter evening, especially when the fire is beginning to burn out, when the candles are becoming faint for want of topping, and a dim religious light, like that filling a hermit's cell from his solitary lamp, is diffused over the apartment. This is the situation most favorable for reveries, waking dreams, and all kinds of brown study, abstraction, ennui, and hypochondria.

Reverie has been known to arise from the mind sustaining temporary weakness, in consequence of long and excessive application to one subject. It is also, I believe, frequently induced by forcing young people to learn what they dislike. In this case, the mind, finding it impossible to direct itself to the hated task, goes wandering off in another direction, and thus acquires a habit of inattention, which, in extreme cases, may terminate in imbecility. Sometimes reverie arises from peculiarity of temperament, either natural or induced by mental or bodily weakness. The best regulated minds and strongest bodies, may, however, and, in fact, often have, occasional attacks: but when the feeling grows into a habit, and is too much indulged in, it is apt to injure the usefulness of the individual, and impair the whole fabric of his understanding. "It is," says Dr. Good, "upon the faculty of attention that every other faculty is dependent for its vigor and expansion: without it, the perception exercises itself in vain; the memory

can lay up no store of ideas; the judgment draw forth no comparisons; the imagination must become blighted and barren; and where there is no attention whatever, the case must necessarily verge upon fatuity." I conceive that persons in whom the organ of *Concentrativeness* is very small, are peculiarly apt to fall into reverie.

The following is a remarkable instance of reverie arising from excessive application:—The subject of it was Mr. Spalding, a gentleman well known as an eminent literary character in Germany, and much respected by those who knew him. The case was drawn up by himself, and published in the *Psychological Magazine.*

"I was this morning engaged with a great number of people who followed each other quickly, and to each of whom I was obliged to give my attention. I was also under the necessity of writing much; but the subjects, which were various and of a trivial and uninteresting nature, had no connexion the one with the other; my attention, therefore, was constantly kept on the stretch, and was continually shifting from one subject to another. At last it became necessary that I should write a receipt for some money I had received on account of the poor. I seated myself and wrote the two first words, but in a moment found that I was incapable of proceeding, for I could not recollect the words which belonged to the ideas that were present in my mind. I strained my attention as much as possible, and tried to write

one letter slowly after the other, always having an eye to the preceding one, in order to observe whether they had the usual relationship to each other; but I remarked, and said to myself at the time, that the characters I was writing were not those which I wished to write, and yet I could not discover where the fault lay. I therefore desisted, and partly by broken words and syllables, and partly by gesture, I made the person who waited for the receipt understand he should leave me. For about half an hour there reigned a kind of tumultuary disorder in my senses, in which I was incapable of remarking any thing very particular, except that one series of ideas forced themselves involuntarily on my mind. The trifling nature of these thoughts I was perfectly aware of, and was also conscious that I made several efforts to get rid of them, and supply their place by better ones, which lay at the bottom of my soul. I endeavored as much as lay in my power, considering the great crowd of confused images which presented themselves to my mind, to recall my principles of religion, of conscience, and of future expectation; these I found equally correct, and fixed as before. There was no deception in my external senses, for I saw and knew every thing around me; but I could not free myself from the strange ideas which existed in my head. I endeavored to speak in order to discover whether I was capable of saying any thing that was connected; but although I made the greatest

efforts of attention, and proceeded, with the utmost caution, I perceived that I uniformly spoke other words than those I intended. My soul was at present as little master of the organs of speech, as it had been before of my hand in writing. Thank God, this state did not continue very long, for, in about half an hour, my head began to grow clearer, the strange and tiresome ideas became less vivid and turbulent, and I could command my own thoughts with less interruption.

"I now wished to ring for my servant, and desire him to inform my wife to come to me; but I found it still necessary to wait a little longer to exercise myself in the right pronunciation of the few words I had to say: and the first half hour's conversation I had with her was, on my part, preserved with a slow and anxious circumspection, until at last I gradually found myself as clear and serene as in the beginning of the day, all that now remained was a slight headache. I recollected the receipt I had begun to write, and in which I knew I had blundered; and upon examining it, I observed to my great astonishment, that instead of the words *fifty dollars*, *being one half year's rate*, which I ought to have written, the words were *fifty dollars through the salvation of Bra—*, with a break after it, for the word *Bra* was at the end of a line. I cannot recollect any perception, or business which I had to transact, that could, by means of an obscure influence, have produced this phenomenon."

Reverie, when proceeding, as in this case, from excessive application, will seldom be difficult of cure: the removal of the exciting cause will of itself naturally constitute the remedy. When it arises from such a defect in education as that already mentioned, the cure will be more difficult, although even then it is not always impracticable. In such a case, the person should be strongly directed to those subjects in which he feels most interest, and never be made to study what he has not a positive liking for. Active employment and gay and pleasant society, may effect much in restoring the intellectual balance. In all cases, whatever, he should never be left long alone; as nothing has such a tendency to foster this state of mind as solitude.

CHAPTER XVII.

ABSTRACTION.

Abstraction, or absence of mind, has been confounded with reverie, but it is, in reality, a different intellectual operation; for as in the latter a difficulty is experienced in making the mind bear strongly on any one point, in the former its whole energies are concentrated towards a single focus, and every other circumstance is, for the time, utterly forgotten. Such was the case with Sir Isaac Newton when, in a fit of absence, he made a tobacco stopper of the lady's finger, and with Archimedes, who remained unconscious and unmoved during the noise and slaughter of captured Syracuse. Though, in general, abstraction is easily broken by outward impressions, there have been instances where it has been so powerful as to render the individuals laboring under it insensible to pain. Pinel in his *Nosographie Philosophique* speaks of a priest who in a fit of mental absence was unconscious of the pain of burning; and

Cardan brought himself into such a state as to be insensible to all external impression.

Some men are naturally very absent; others acquire this habit from particular pursuits, such as mathematics, and other studies demanding much calculation. Indeed, all studies which require deep thinking, are apt to induce mental absence, in consequence of the sensorial power being drained from the general circumference of the mind, and directed strongly to a certain point. This draining, while it invigorates the organ of the particular faculty towards which the sensorial energy is concentrated, leaves the others in an inanimate state, and incapacitates them from performing their proper functions; hence persons subject to abstraction are apt to commit a thousand ludicrous errors; they are perpetually blundering — committing a multitude of petty, yet harmless offences against established rules, and forever getting into scrapes and absurd situations. Nothing is more common than for an absent man to take the hat of another person instead of his own, to give away a guinea for a shilling, to mistake his lodgings, forget invitations, and so forth. When the fit of abstraction is very strong, he neither hears what is said to him, nor sees what is passing around. "While you fancy," says Budgell, in the 77th No. of the Spectator, "he is admiring a beautiful woman, it is an even wager that he is solving a proposition in Euclid; and while you imagine he is reading the Paris Gazette, it is far from being impossible that he is

pulling down and rebuilding his country house." In some cases the individual requires to be shaken before he can be brought to take notice of any occurrence; and it is often difficult to make him comprehend even the simplest proposition. Abstraction, therefore, bears an analogy to dreaming; inasmuch as, in each of these states, some faculties are active, while others are at rest. In dreaming, however, the organs of the quiescent faculties are in a much deeper slumber, and less easily roused into activity than in abstraction; hence in the great majority of cases, abstraction is broken with greater facility than sleep.

It appears from the observations of the Edinburgh phrenologists, that individuals who have a large development of the organ of *Concentrativeness* are peculiarly liable to fall into a state of abstraction. The effect of such a development is fixity of ideas — the power and tendency to think consecutively and steadily upon one subject. "In conversing with some individuals," says Mr. Combe,* "we find them fall naturally into a connected train of thinking; either dwelling on a subject which interests them, till they have placed it clearly before the mind, or passing naturally and gracefully to a connected topic. Such persons uniformly have this organ large. We meet with others, who in similar circumstances, never pursue one idea for two consecutive seconds, who

* System of Phrenology, p. 135.

shift from topic to topic, without regard to natural connexion, and leave no distinct impression on the mind of the listener; and this happens even with individuals in whom reflection is not deficient; but this organ (*Concentrativeness*) is, in such persons, uniformly small." A good endowment of the power in question adds very much to the efficiency of the intellect, by enabling its possessor to apply his mind continuously to a particular investigation, unannoyed by the intrusion of foreign and irrelevant ideas. It seems to have been very strong in Sir Isaac Newton, whose liability to abstraction has already been alluded to. "During the two years," says Biot, "which he spent in preparing and developing his immortal work, *Philosophiæ Naturalis Principia Mathematica*, he lived only to calculate and to think. Oftentimes lost in the contemplation of these grand objects, he acted unconsciously; his thoughts appearing to preserve no connexion with the ordinary affairs of life. It is said, that frequently, on rising in the morning, he would sit down on his bedside, arrested by some new conception, and would remain for hours together engaged in tracing it out, without dressing himself." "To one who asked him, on some occasion, by what means he had arrived at his discoveries, he replied, 'By always thinking unto them.' And at another time, he thus expressed his method of proceeding,—'I keep the subject constantly before me, and wait till the first dawning opens slowly, by little and little, into a full and

clear light.' Again, in a letter to Dr. Bentley, he says, 'If I have done the public any service this way, it is due to nothing but industry and patient thought.'" Biot mentions further, that, "in general, the intensity of thinking was with him so great that it entirely abstracted his attention from other matters, and confined him exclusively to one object. Thus, we see that he never was occupied at the same time with two different scientific investigations."

The instances of abstraction upon record are so numerous that a volume might easily be filled with them. Hogarth, the illustrious painter, affords a good specimen. Having got a new carriage, he went in it to the Mansion-House, for the purpose of paying a visit to the Lord Mayor. On leaving the house he went out by a different door from that by which he entered, and found that it rained hard. Notwithstanding this, he walked homewards, and reached his own dwelling drenched to the skin. His wife seeing him in this state, asked him how it happened, and what had become of his carriage since he had not returned home in it. The truth was, that he had actually forgotten he had a carriage, or had gone in one at all.

The following case, from the pleasant style in which it is told, will amuse the reader.

"It is a case of one of the most profound and clear-headed philosophical thinkers, and one of the most amiable of men, becoming so completely absorbed in his own reflections, as to lose the per-

ception of external things, and almost that of his own identity and existence. There are few that have paid any attention to the finance of this country, but must have heard of Dr. Robert Hamilton's 'Essay on the National Debt,' which fell upon the Houses of Parliament like a bombshell, or, rather, which rose and illuminated their darkness like an orient sun. There are other writings of his in which one knows not which most to admire—the profound and accurate science, the beautiful arrangement, or the clear expression. Yet, in public, the man was a shadow; pulled off his hat to his own wife in the streets, and apologized for not having the pleasure of her acquaintance; went to his classes in the college on the dark mornings, with one of her white stockings on the one leg, and one of his own black ones on the other; often spent the whole time of the meeting in moving from the table the hats of the students, which they as constantly returned; sometimes invited them to call on him, and then fined them for coming to insult him. He would run against a cow in the road, turn, round beg her pardon, 'Madam,' and hope she was not hurt. At other times he would run against posts, and chide them for not getting out of his way; and yet his conversation at the same time, if any body happened to be with him, was perfect logic and perfect music. Were it not that there may be a little poetic license in Aberdeen story-telling, a volume might be filled with anecdotes of this amiable and excellent man,

all tending, to prove how wide the distinction is between first rate thought and that merely animal use of the organs of sense which prevents ungifted mortals from walking into wells. The fishmarket at Aberdeen, if still where it used to be, is near the Dee, and has a stream passing through it that falls into that river. The fish women expose their wares in large baskets. The Doctor one day marched into that place, where his attention was attracted by a curiously figured stone in a stack of chimneys. He advanced towards it, till he was interrupted by one of the benches, from which, however, he tumbled one of the baskets into the stream, which was bearing the fish to their native element. The visage of the lady was instantly in lightning, and her voice in thunder; but the object of her wrath was deaf to the loudest sounds, and blind to the most alarming colors. She stamped, gesticulated, scolded, brought a crowd that filled the place; but the philosopher turned not from his eager gaze and his inward meditations on the stone. While the woman's breath held good, she did not seem to heed, but when that began to fail, and the violence of the act moved not one muscle of the object, her rage felt no bounds: she siezed him by the breast, and yelling, in an effort of despair, 'Spagh ta ma, or I'll burst,' sank down among the remnant of her fish in a state of complete exhaustion; and before she had recovered, the Doctor's reverie was over, and he had taken his departure."*

* "New Monthly Magazine," vol. xxxviii. p. 510.

Many curious anecdotes of a similar kind are related of the Rev. Dr. George Harvest, one of the ministers of Thames Ditton. So confused on some occasions, were the ideas of this singular man, that he has been known to write a letter to one person, address it to a second, and send it to a third. He was once on the eve of being married to the bishop's daughter, when, having gone a gudgeon-fishing, he forgot the circumstance, and overstaid the canonical hour, which so offended the lady, that she indignantly broke off the match. If a beggar happened to take off his hat to him on the streets, in hopes of receiving alms, he would make him a bow, tell him he was his most humble servant, and walk on. He has been known on Sunday to forget the days on which he was to officiate, and would walk into church with his gun under his arm, to ascertain what the people wanted there. Once, when he was playing at backgammon, he poured out a glass of wine, and it being his turn to throw, having the box in one hand and the glass in the other, and being extremely dry, and unwilling to lose any time, he swallowed down both the dice, and discharged the wine upon the dice-board. "Another time," says the amusing narrative which has been published of his peculiarities, in one of his absent fits, he mistook his friend's house, and went into another, the door of which happened to stand open; and no servant being in the way, he rambled all over the house, till, coming into a middle room, where there was

an old lady ill in bed of a quincy, he stumbled over the night-stool, threw a clothes-horse down, and might not have ended there, had not the affrighted patient made a noise at his intrusion, which brought up the servants, who, finding Dr. Harvest in the room, instead of the apothecary that was momentarily expected, quieted the lady's fears, who by this time was taken with such an immoderate fit of laughter at his confusion, that it broke the quincy in her throat, and she lived many years afterwards to thank Dr. Harvest for his unlucky mistake." "His notorious heedlessness was so apparent, that no one would lend him a horse, as he frequently lost his beast from under him, or, at least from out of his hands, it being his frequent practice to dismount and lead the horse, putting the bridle under his arm, which the horse sometimes shook off, or the intervention of a post occasioned it to fall; sometimes it was taken off by the boys, when the parson was seen drawing his bridle after him; and if any one asked him after the animal, he could not give the least account of it, or how he had lost it." In short the blunders which he committed were endless, and would be considered incredible, were they not authenticated by incontestible evidence. Yet, notwithstanding all this, Harvest was a man of uncommon abilities, and an excellent scholar.

Bacon, the celebrated sculptor, exhibited, on one occasion, a laughable instance of absence of mind. "Bacon was remarkably neat in his dress, and, ac-

cording to the costume of the old school, wore, in fine weather, a powdered wig, ruffles, silver buckles, with silk stockings, &c., and walked with his gold-headed cane. Thus attired, he one day called at St. Paul's, shortly after having erected the statue of the benevolent Howard, and before the boarding which enclosed the statue had been removed. One of his sons was employed, at this time, in finishing the statue. After remaining a short time, he complained of feeling somewhat cold, on which the son proposed, as no one could overlook them, that he should put on, as a kind of temporary spencer, an old torn, green shag waistcoat, with a red stuff back, which had been left there by one of the workmen. He said it was a 'good thought,' and accordingly buttoned the waistcoat over his handsome new coat. Shortly afterwards, he was missing, but returned in about an hour, stating that he had been to call on a gentleman in Doctor's Commons, and had sat chatting with his wife and daughters, whom he had never seen before; that he found them to be exceedingly pleasant women, though perhaps a little disposed to laugh and titter about he knew not what. 'Sir,' said the son, 'I am afraid I can explain their mysterious behaviour; surely you have not kept on that waistcoat all the time?' 'But, as sure as I am a living man, I have,' said he, laughing heartily, 'and I can now account not only for the strange behaviour of the ladies, but for all the jokes that have been cracked about me as I walked along the

street—some crying let him alone, he does it for a wager, &c. &c.; all which, from being quite unconscious of my appearance, I thought was levelled at some other quiz that might be following near me; and I now recollect that, whenever I looked round for the object of their pleasantry, the people laughed, and the more so, as, by the merry force of sympathy, I laughed also, although I could not comprehend what it all meant.'"

I shall conclude by mentioning an anecdote of Mr. Warton, the accomplished Professor of Poetry in the University of Oxford. "This good divine, having dined with some jolly company at a gentleman's house in that city, passing through the streets to the church, it being summer-time his ears were loudly saluted with the cry of 'Live mackerel!' This so much dwelt upon the Doctor's mind, that after a nap while the psalm was performing, as soon as the organ ceased playing, he got up to the pulpit, and, with eyes half open, cried out, 'All alive, alive oh!' thus inadvertently keeping up the reputation of a Latin proverb, which is translated in the following lines:—

'Great wits to madness nearly are allied,
And thin partitions do their bounds divide.'

"The Professor of Poetry perhaps supposed himself yet with his companions at the convivial table."

Mental absence is generally incurable. In stout subjects, depletion, purging, and low diet, will sometimes be of use. Where the affection seems

to arise from torpor of the nervous system, blistering the head and internal stimuli afford the most probable means of relief. The person should associate as much as possible with noisy, bustling people, and shun solitude and all such studies as have a tendency to produce abstraction.

CHAPTER XVIII.

SLEEP OF PLANTS.

During night, plants seem to exist in a state analogous to sleep. At this period they get relaxed, while their leaves droop and become folded together. Such is peculiarly the case with the tamarind tree, and the leguminous plants with pinnated leaves; but with almost all plants it takes place in a greater or lesser degree, although in some the change is much more striking than in others. The trefoil, the *Oxalis*, and other herbs with ternate leaves, sleep with their leaflets folded together in the erect posture. The cause of the different states in which plants exist during the day and night has never been correctly ascertained—some attributing it to the influence of light, some to the vicissitudes of temperature, and others to atmospherical humidity. Probably the whole of these influences are concerned. It is very evident that the presence of certain stimuli during the day puts the leaves in a state of activity, and excites their development; while the want of such stimuli in the night time throws them into repose, relaxes them, and occa-

sions them to be weighed down, as if the sustaining principle which kept them in energy was suspended in the torpor of sleep. The principal of these stimuli is unquestionably light; indeed, Linnæus, from the observation of stove plants, seems to have demonstrated that it is the withdrawing of light, and not of heat, which produces the relaxation or *Sleep of Plants*, as it is commonly denominated. The effect of light upon the leaves of the *Acacia* is peculiarly striking. At sunrise they spread themselves out horizontally; as the heat increases they become elevated, and at noon shoot vertically upwards: but as soon as the sun declines they get languid and droop, and during night are quite pendent and relaxed. During day, the leaves of most plants are spread out and displayed, and at the same time, inclined towards the sun. Those of the *Helianthus annuus*, the *Helianthemum annuum*, and *Croton tinctorium* follow the course of the sun in their position; and most buds and flowers have a tendency to turn their heads in the direction of the great luminary of day. As an instance of this, let us look at the sun-flower, which confronts the source of light with its broad yellow expansion of aspect, and hangs its gorgeous head droopingly so soon as the object of its worship declines. The leaves of a great number of vegetables present changes in their position corresponding to the different hours of the day. "Who does not know," says Willdenow, "that the species of *Lupinus*, especially *Lupinus luteus*,

turn, in the open air, their leaves and stalks towards the sun, and follow its course in so steady a manner, as to enable us to specify the hour of the day from their direction." Such phenomena were not unknown to Pliny and Theophrastus.

The analogy between animal and vegetable life is still farther demonstrated by the well known fact, that while some creatures, such as the cat and owl, sleep during the day, and continue awake at night, certain plants do the same thing. Such is the case with the *Tragopogon luteum*, which becomes closed, or in other words, goes to sleep at nine in the morning, and opens at night. Every hour of the day, indeed, has some particular plant which then shuts itself up: hence the idea of the Flower Dial by means of which the hour of the day can be told with tolerable accuracy. Some plants, which shut themselves up in the day time, flower at night. The night-flowering *Cereus*, a species of cactus, is a beautiful instance of the kind; and there are other plants which exhibit the same interesting phenomenon. Nothing, indeed, can be more beautiful than the nocturnal flowering of certain members of the vegetable world. Linnæus used to go out at night with a lantern into his garden to have an opportunity of witnessing this remarkable peculiarity in the plants by which it is exhibited.

The analogy between the two kingdoms is rendered yet more striking, when it is recollected that, (with such exceptions as the above,) plants in-

crease much more rapidly during night, which is their time of sleep, than in the day-time, which may be considered the period of their active or waking existence.

The state in which plants exist in the winter season, resembles the hybernation of animals: there is the same torpor and apparent extinction of vitality. Heat and light have the power of both reviving plants and putting an end to hybernation. Between plants and animals, however, there is this difference: that while *most* plants become torpid in winter, only a *small number* of animals get into that state; but even in such dissimilitude we can trace an analogy; for as there are animals upon which winter has no torpifying influence, so are there likewise plants. The *Helleborus hyemalis* or christmas rose, flowers at the end of December, and the *Galanthus nivilis*, or snow-drop, in the month of February.

CHAPTER XIX.

GENERAL MANAGEMENT OF SLEEP.

In the foregoing pages, I have detailed at length all the principal phenomena of sleep; and it now only remains to state such circumstances as affect the comfort and healthfulness of the individual while in that condition. The first I shall mention is the nature of the chamber in which we sleep; this should be always large and airy. In modern houses, these requisites are too much overlooked; and, while the public rooms are of great dimensions, those appropriated for sleeping are little better than closets. This error is exceedingly detrimental to health. The apartments wherein so great a portion of life is passed, should always be roomy, and, if possible, not placed upon the ground-floor, because such a situation is more apt to be damp and ill ventilated than higher up.

The next consideration applies to the bed itself, which ought to be large, and not placed close to the wall, but at some distance from it, both to avoid any dampness which may exist in the wall, and

admit a freer circulation of air. The curtains should never be drawn closely together, even in the coldest weather; and when the season is not severe, it is a good plan to remove them altogether. The bed or mattress ought to be rather hard. Nothing is more injurious to health than soft beds; they effeminate the individual, render his flesh soft and flabby, and incapacitate him from undergoing any privation. The texture of which the couch is made, is not of much consequence, provided it is not too soft: hence, feather-beds, or mattresses of hair or straw are almost equally good, if suitable in this particular. I may mention, however, that the hair mattress, from being cooler, and less apt to imbibe moisture, is preferable during the summer season, to a bed of feathers. Those soft yielding feather-beds, in which the body sinks deeply, are highly improper, from the unnatural heat and perspiration which they are sure to induce. Air-beds have been lately recommended, but I can assert, from personal experience, that they are the worst that can possibly be employed. They become very soon heated to such an unpleasant degree as to render it impossible to repose upon them with any comfort. For bed-ridden persons, whose skin has become irritated by long lying, the hydrostatic bed, lately brought into use in some of the public hospitals, is the best.

The pillow as well as the bed, should be pretty hard. When very soft, the head soon sinks in it, and becomes unpleasantly heated. The objection

made to air-beds applies with equal force to air-pillows, which I several times attempted to use, but was compelled to abandon, owing to the disagreeable heat that was generated in a few minutes.

With regard to the covering, there can be no doubt that it is more wholesome to lie between sheets than blankets. For the same reason, people should avoid sleeping in flannel nightshirts. Such a degree of warmth as is communicated by those means is only justifiable in infancy and childhood, or when there is actual disease or weakness of constitution. Parents often commit a great error in bringing up their young people under so effeminate a system.

A common custom prevails of warming the bed before going to sleep. This enervating practice should be abandoned except with delicate people, or when the cold is very intense. It is far better to let the bed be chafed by the natural heat of the body, which, even in severe weather, will be sufficient for the purpose, provided the clothing is abundant.

We ought never to sleep overloaded with clothes, but have merely what is sufficient to maintain a comfortable warmth.

When a person is in health, the atmosphere of his apartment should be cool; on this account, fires are exceedingly hurtful, and should never be had recourse to, except when the individual is delicate, or the weather intolerably severe. When they become requisite, smoke must be carefully

guarded against, as fatal accidents have arisen from this cause.

The window-shutters ought never to be entirely closed, neither ought they to be kept altogether open. In the first case, we are apt to oversleep ourselves, owing to the prevailing darkness with which we are surrounded; and in the second, the light which fills the aparment, especially if it be in the summer season, may disturb our repose, and waken us at an earlier hour than there is any occasion for. Under both circumstances, the eyes are liable to suffer; the darkness in the one instance, disposes them to be painfully affected, on exposure to the brilliant light of day, besides directly debilitating them—for, in remaining too much in the gloom, whether we be asleep or awake, these organs are sure to be more or less weakened. In the other case, the fierce glare of the morning sun acting upon them, perhaps for several hours before we get up, does equal injury, making them tender and easily affected by the light. The extremes of too much and too little light must, therefore, be avoided, and such a moderate portion admitted into the chamber as not to hurt the eyes, or act as too strong a stimulus in breaking our slumbers.

During the summer heats, the covering requires to be diminished, so as to suit the atmospheric temperature; and a small portion of the window drawn down from the top, to promote a circulation of air; but this must be done cautiously, and the current prevented from coming directly upon the

sleeper, as it might give rise to colds, and other bad consequences. The late Dr. Gregory was in the habit of sleeping with the window drawn slightly down during the whole year: and there can be no doubt that a gentle current pervading our sleeping apartments, is in the highest degree essential to health.

Nothing is so injurious as damp beds. It becomes every person, whether at home or abroad, to look to this matter, and see that the bedding on which he lies is thoroughly dry, and free from even the slightest moisture. By neglecting such a precaution, rheumatism, colds, inflammations, and death itself may ensue. Indeed these calamities are very frequently traced to sleeping incautiously upon damp beds. For the same reason, the walls and floor should be dry, and wet clothes never hung up in the room.

We should avoid sleeping in a bed that has been occupied by the sick, till the bedding has been cleansed and thoroughly aired. When a person has died of any infectious disease, not only the clothes in which he lay, but the couch itself ought to be burned. Even the bed-stead should be carefully washed and fumigated.

Delicate persons who have been accustomed to sleep upon feather-beds, must be cautious not to exchange them rashly for any other.

On going to sleep, all sorts of restraints must be removed from the body; the collar of the night-shirt should be unbuttoned and the neckcloth

taken off. With regard to the head, the more lightly it is covered the better: on this account, we should wear a thin cotton or silk night-cap; and this is still better if made of net-work. Some persons wear worsted, or flannel caps, but these are never proper, except in old or rheumatic subjects. The grand rule of health is to keep the head cool, and the feet warm; hence, the night-cap cannot be too thin. In fact, the chief use of this piece of clothing is to preserve the hair, and preserve it from being disordered and matted together.

Sleeping in stockings is a bad and uncleanly habit. By accustoming ourselves to do without any covering upon the feet, we shall seldom experience cold in these parts, if we have clothing enough to keep the rest of the system comfortable; and should they still remain cold, this can easily be obviated by wrapping a warm flannel cloth around them, or by applying to them, for a few minutes, a heated iron, or a bottle of warm water.

The posture of the body must be attended to. The head should be tolerably elevated, especially in plethoric subjects; and the position, from the neck downwards, as nearly as possible horizontal. The half-sitting posture, with the shoulders considerably raised, is injurious, as the thoracic and abdominal viscera are thereby compressed, and respiration, digestion, and circulation, materially impeded. Lying upon the back is also improper, in consequence of its tendency to produce nightmare. Most people pass the greater part of the

night upon the side, which is certainly the most comfortable position that can be assumed in sleep. According to Dr. A. Hunter, women who love their husbands generally lie upon the right side. This interesting point I have no means of ascertaining, although, doubtless, the ladies are qualified to speak decidedly upon the subject. I have known individuals who could not sleep except upon the back; but these are rare cases.

I have mentioned the necessity of a free circulation of air. On this account, it is more wholesome to sleep single, than double, for there is then less destruction of oxygen; and the atmosphere is much purer and cooler. For the same reason, the practice, so common in public schools, of having several beds in one room, and two or three individuals in each bed, must be deleterious. When more than one sleep in a single bed, they should take care to place themselves in such a position as not to breathe in each other's faces. Some persons have a dangerous custom of covering their heads with the bedclothes. The absurdity of this practice needs no comment.

Before going to bed, the body should be brought into that state which gives us the surest chance of dropping speedily asleep. If too hot, its temperature ought to be reduced by cooling drinks, exposure to the open air, sponging, or even the cold bath; if too cold, it must be brought into a comfortable state by warmth; for both cold and heat act as stimuli, and their removal is necessary before

slumber can ensue. A full stomach, also, though it sometimes promotes, generally prevents sleep; consequently, supper ought to be dispensed with, except by those who, having been long used to this meal, cannot sleep without it. As a general rule, the person who eats nothing for two or three hours before going to rest, will sleep better than he who does. His sleep will also be more refreshing, and his sensations upon awaking much more gratifying. The Chinese recommended brushing the teeth previous to lying down: this is a good custom.

Sleeping after dinner is pernicious. On awaking from such indulgence, there is generally some degree of febrile excitement, in consequence of the latter stages of digestion being hurried on: it is only useful in old people, and in some cases of disease.

The weak, and those recovering from protracted illnesses, must be indulged with more sleep than such as are vigorous. Sleep, in them, supplies, in some measure, the place of nourishment, and thus becomes a most powerful auxiliary for restoring them to health. Much repose is likewise necessary to enable the system to recover from the effects of dissipation.

Too little and too much sleep are equally injurious. Excessive wakefulness, according to Hippocrates, prevents the aliment from being digested, and generates crude humors. Too much sleep produces lassitude and corpulency, and

utterly debases and stupifies the mind. Corpulent people being apt to indulge in excessive sleep, they should break this habit at once, as, in their case, it is peculiarly unwholesome. They ought to sleep little, and that little upon hard beds.

The practice of sleeping in the open air, cannot be too strongly reprobated. It is at all times dangerous, especially when carried into effect under a burning sun, or amid the damps of night. In tropical climates, where this custom is indulged in during the day, it is not unusual for the person to be struck with a *coup-de-soleil*, or some violent fever; and, in our own country, nothing is more common than inflammations, rheumatisms, and dangerous colds, originating from sleeping upon the ground, either during the heat of the day, or when the evening has set in with its attendant dews and vapors.

As respects the repose of children it may be remarked that the custom of rocking them asleep in the cradle, is not to be recommended, sanctioned though it be by the voice of ages. This method of procuring slumber, not only heats the infant unnecessarily, but, in some cases, disorders the digestive organs, and, in most, produces a sort of artificial sleep, far less conducive to health, than that brought on by more natural means. According to some writers, it has also a tendency to induce water in the head, a circumstance which I think possible, although I never knew a case of that disease which could be traced to such a source. The cradle, then, should be abandoned, so far as the

rocking is concerned, and the child simply lulled to repose in the nurse's arms, and then deposited quietly in bed. Sleep will often be induced by gently scratching or rubbing the top of the child's head. This fact is well known to some nurses, by whom the practcie is had recourse to for the purpose of provoking slumber in restless children. For the first month of their existence, children sleep almost continually, and they should be permitted to do so, for at this early age they cannot slumber too much: calm and long-continued sleep is a favorable symptom, and ought to be cherished rather than prevented, during the whole period of infancy. When, however, a child attains the age of three or four months, we should endeavor to manage so that its periods of wakefulness may occur in the day-time, instead of at night. By proper care, a child may be made to sleep at almost any hour; and, as this is always an object of importance, it should be sedulously attended to in the rearing of children. Until about the third year, they require a little sleep in the middle of the day, and pass half their time in sleep. Every succeeding year, till they attain the age of seven, the period allotted to repose should be shortened one hour, so that a child of that age may pass nine hours or thereabouts, out of the twenty-four, in a state of sleep. Children should never be awakened suddenly, or with a noise, in consequence of the terror and starting which such a method of arousing them produces: neither should they be brought all at once from a dark room into a strong

glare of light, lest their eyes be weakened, and permanent injury inflicted upon these organs.

The position in which children sleep requires to be carefully attended to. Sir Charles Bell mentions that the *eneuresis infantum*, with which they are so often affected, frequently arises from lying upon the back, and that it will be removed or prevented by accustoming them to lie on the side. It is also of the greatest importance, that they be kept sufficiently warm. I believe that many infantile diseases arise from the neglect of this precaution. Children have little power of evolving heat; on this account, when delicate they should never be permitted to sleep alone, but made to lie with the nurse, that they may receive warmth from her body.

At whatever period we go to sleep, one fact is certain, that we can never with impunity convert day into night. Even in the most scorching seasons of the year, it is better to travel under the burning sunshine, than in the cool of the evening, when the dews are falling and the air is damp. A case in support of this statement, is given by Valangin in his work on Diet. Two Colonels in the French army had a dispute whether it was most safe to march in the heat of the day, or in the evening. To ascertain this point, they got permission from the commanding officer to put their respective plans into execution. Accordingly, the one with his division marched during the day, although it was in the heat of summer, and rested

all night—the other slept in the day-time, and marched during the evening and part of the night. The result was that the first performed a journey of six hundred miles, without losing a single man or horse, while the latter lost most of his horses, and several of his men.

It now becomes a question at what hour we should retire to rest, how long our rest ought to continue, and when it should be broken in the morning. These points I shall briefly discuss, in the order in which they stand.

It is not very easy to ascertain the most appropriate hour for going to bed, as this depends very much upon the habits and occupation of the individual. Laborers and all hard wrought people, who are obliged to get up betimes, require to go to rest early; and, in their case, nine o'clock may be the best hour. Those who are not obliged to rise early, may delay the period of retiring to rest for an hour or two longer; and may thus go to bed at ten or eleven. These are the usual periods allotted among the middle ranks of life for this purpose; and it may be laid down as a rule, that to make a custom of remaining up for a later period than eleven must be prejudicial. Those, therefore, who habitually delay going to bed till twelve, or one, or two, are acting in direct opposition to the laws of health, in so far as they are compelled to pass in sleep a portion of the ensuing day, which ought to be appropriated to wakefulness and exertion. Late hours are in every respect hurtful,

whether they be employed in study or amusement. A fresh supply of stimulus is thrown upon the mind, which prevents it from sinking into slumber at the proper period, and restlessness, dreaming, and disturbed repose inevitably ensue. Among other things, the eyes are injured, those organs suffering much more from the candle-light, to which they are necessarily exposed, than from the natural light of day.

With regard to the necessary quantity of sleep, so much depends upon age, constitution, and employment, that it is impossible to lay down any fixed rule which will apply to all cases. Jeremy Taylor states that three hours only in the twenty-four should be devoted to sleep. Baxter extends the period to four hours, Wesley to six, Lord Coke and Sir William Jones to seven, and Sir John Sinclair to eight. With the latter I am disposed to coincide. Taking the average of mankind, we shall come as nearly as possible to the truth when we say that nearly one-third part of life ought to be spent in sleep: in some cases, even more may be necessary, and in few can a much smaller portion be safely dispensed with. When a person is young, strong, and healthy, an hour or two less may be sufficient; but childhood and extreme old age require a still greater portion. No person who passes only eight hours in bed, can be said to waste his time in sleep. If, however, he exceeds this, and is, at the same time, in possession of vigor and youth, he lays himself open to the charge of slumbering away those hours which should be

devoted to some other purpose. According to Georget, women should sleep a couple of hours longer than men. For the former he allows six or seven hours, for the latter eight or nine. I doubt, however, if the female constitution, generally speaking, requires more sleep than the male; at least it is certain that women endure protracted wakefulness better than men, but whether this may result from custom is a question worthy of being considered.

Barry, in his work on Digestion, has made an ingenious, but somewhat whimsical, calculation on the tendency of sleep to prolong life. He asserts, that the duration of human life may be ascertained by the number of pulsations which the individual is able to perform. Thus, if a man's life extends to 70 years, and his heart throbs 60 times each minute, the whole number of its pulsations will amount to 2,207,520,000; but if, by intemperance, or any other cause, he raises the pulse to 75 in the minute, the same number of pulsations would be completed in 56 years, and the duration of life abbreviated 14 years. Arguing from these data, he alleges, that sleep has a tendency to prolong life, as, during its continuance, the pulsations are less numerous than in the waking state. There is a sort of theoretical truth in this statement, but it is liable to be modified by so many circumstances, that its application can never become general. If this were not the case, it would be natural to infer that the length of a man's life would correspond with that of his slumbers;

whereas it is well known, that too much sleep debilitates the frame, and lays the foundation of various diseases, which tend to shorten rather than extend the duration of life.

Those who indulge most in sleep, generally require the least of it. Such are the wealthy and luxurious, who pass nearly the half of their existence in slumber, while the hard-working peasant and mechanic, who would seem, at first sight, to require more than any other class of society, are contented with seven or eight hours of repose—a period brief in proportion to that expended by them in toil, yet sufficiently long for the wants of nature, as is proved by the strength and health which they almost uniformly enjoy.

For reasons already stated, more sleep is requisite in winter than in summer. Were there even no constitutional causes for this difference, we should be disposed to sleep longer in the one than in the other, as some of the circumstances which induce us to sit up late and rise early in summer, are wanting during winter; and we consequently feel disposed to lie longer in bed during the latter season of the year.

The hour of getting up in the morning is not of less importance than that at which we ought to lie down at night. There can be no doubt that one of the most admirable conducives to health is early rising. "Let us," says Solomon, "go forth into the fields; let us lodge in the villages; let us *get up early* to the vineyards; let us see if the vine

flourish—if the tender grape appear—if the pomegranates bud forth."

Almost all men who have distinguished themselves in science, literature, and the arts, have been early risers. The industrious, the active-minded, the enthusiast in the pursuit of knowledge or gain, are up betimes at their respective occupations; while the sluggard wastes the most beautiful period of life in pernicious slumber. Homer, Virgil, and Horace are all represented as early risers: the same was the case with Paley, Franklin, Priestly, Parkhurst, and Buffon, the latter of whom ordered his *valet-de-chamber* to awaken him every morning, and compel him to get up by force if he evinced any reluctance: for this service the valet was rewarded with a crown each day, which recompense he forfeited if he did not oblige his master to get out of bed before the clock struck six. Bishops Jewel and Burnet rose regularly every morning at four o'clock. Sir Thomas More did the same thing; and so convinced was he of the beneficial effects of getting up betimes, that, in his "Utopia," he represented the inhabitants attending lectures before sunrise. Napoleon was an early riser; so was Frederick the Great and Charles XII.; so is the Duke of Wellington; and so, in truth, is almost every one distinguished for energy and indefatigability of mind.

Every circumstance contributes to render early rising advisable to those who are in the enjoyment of health. There is no time equal in beauty and

freshness to the morning, when nature has just parted with the gloomy mantle which night had flung over her, and stands before us like a young bride, from whose aspect the veil which covered her loveliness, has been withdrawn. The whole material world has a vivifying appearance. The husbandman is up at his labor, the forest leaves sparkle with drops of crystal dew, the flowers raise their rejoicing heads towards the sun, the birds pour forth their anthems of gladness; and the wide face of creation itself seems as if awakened and refreshed from a mighty slumber. All these things, however, are hid from the eyes of the sluggard; nature, in her most glorious aspect, is, to him, a sealed book; and while every scene around him is full of beauty, interest, and animation, he alone is passionless and uninspired. Behold him stretched upon his couch of rest! In vain does the clock proclaim that the reign of day has commenced! In vain does the morning light stream fiercely in by the chinks of his window, as if to startle him from his repose! He hears not—he sees not, for blindness and deafness rule over him with despotic sway, and lay a deadening spell upon his faculties. And when he does at length awake—far on in the day—from the torpor of this benumbing sleep, he is not refreshed. He does not start at once into new life—an altered man, with joy in his mind, and vigor in his frame. On the contrary, he is dull, languid, and stupid, as if half recovered from a paroxysm of drunkenness. He yawns, stretches

himself, and stalks into the breakfast parlor, to partake in solitude, and without appetite, of his unrefreshing meal—while his eyes are red and gummy, his beard unshorn, his face unwashed, and his clothes disorderly, and ill put on. Uncleanliness and sluggishness generally go hand in hand; for the obtuseness of mind which disposes a man to waste the most precious hours of existence in debasing sleep, will naturally make him neglect his person.

The character of the early riser is the very reverse of the sloven's. His countenance is ruddy, his eye joyous and serene, and his frame full of vigor and activity. His mind, also, is clear and unclouded, and free from that oppressive languor which weighs like a nightmare upon the spirit of the sluggard. The man who rises betimes, is in the fair way of laying in both health and wealth; while he who dozes away his existence in unnecessary sleep, will acquire neither. On the contrary, he runs every chance of losing whatever portion of them he may yet be in possession of, and of sinking fast in the grade of society—a bankrupt both in person and in purse.*

* In the will of the late Mr. James Sergeant of the borough of Leicester, is the following clause relative to early rising: — "As my nephews are fond of indulging in bed in a morning, and as I wish them to improve the time while they are young, I direct that they shall prove to the satisfaction of my executors, that they have got out of bed in the morning, and either employed themselves in business, or taken exercise in the open air, from five o'clock every morning, from the 5th of April, to the 10th of Octo-

The most striking instances of the good effects of early rising, are to be found in our peasantry and farmers, whose hale complexions, good appetites, and vigorous persons, are evidences of the benefit derived from this custom, conjoined with labor; while the wan, unhealthy countenances and enfeebled frames of those who keep late hours, lie long in bed, and pass the night in dissipation, study, or pleasure, are equally conclusive proofs of the pernicious consequences resulting from an opposite practice.

Early rising, therefore, is highly beneficial; but care should be taken not to carry it to excess. It can never be healthful to rise till the sun has been for some time above the horizon; for until this is the case, there is a dampness in the air which must prove injurious to the constitution, especially when it is not naturally very strong. Owing to this, early rising is injurious to most delicate people; and, in all cases, the heat of the sun should be allowed to have acquired some strength before we think of getting out of doors. No healthy man in the summer, should lie longer in bed than six o'clock. If he does so, he loses the most valuable

ber, being three hours each day, and from seven o'clock in the morning from the 10th of October to the 5th of April, being two hours every morning for two whole years: this to be done for some two years during the first seven years, to the satisfaction of my executors, who may excuse them in case of illness, but the task must be made up when they are well, and if they will not do this, they shall not receive any share of my property."

part of the day, and injures his own constitution. Persons subject to gout, should always go to sleep early, and rise early. The former mitigates the violence of the evening paroxysm, which is always increased by wakefulness; and the latter lessens the tendency to plethora, which is favored by long protracted sleep.

It is common in some of the foreign universities to go to bed at eight, and rise at three or four in the morning; and this plan is recommended by Willich in his "Lectures on Diet and Regimen." Sir John Sinclair, in allusion to it, judiciously observes, "I have no doubt of the superior healthiness, in the winter time, of rising by day-light, and using candle-light at the close of the day, than rising by candle-light, and using it some hours before day-light approaches. It remains to be ascertained by which system the eyes are least likely to be affected."

Dr. Franklin in one of his ingenious Essays, has some fine observations on early rising; and makes an amusing calculation of the saving that might be made in the city of Paris alone, by using the sunshine instead of candles. This saving he estimates at 96,000,000 of livres, or £4,000,000 sterling. This is mentioned in a satirical vein, but probably there is a great deal of truth in the statement. Indeed, if people were to go sooner to bed, and get up earlier, it is inconceivable what sums might be saved; but according to the absurd custom of polished society, day is, in a great mea-

sure, converted into night, and the order of things reversed in a manner at once capricious and hurtful.

To conclude. The same law which regulates our desire for food, also governs sleep. As we indulge in sleep to moderation or excess, it becomes a blessing or a curse—in the one case recruiting the energies of nature, and diffusing vigor alike over the mind and frame: in the other, debasing the character of man, stupifying his intellect, enfeebling his body, and rendering him useless alike to others and himself. The glutton, the drunkard, and the sloven bear the strictest affinity to each other, both in the violation of nature's laws, and in the consequences thence entailed upon themselves. What in moderation is harmless or beneficial, in excess is a curse; and sleep carried to the latter extreme, may be pronounced an act of intemperance almost as much as excessive eating or drinking.

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